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Quantity Production in Art Industries

Frequent Style Changes Complicate Situation for Textile Mills—Means to Render More Safe the Manufacture of Products Featuring Creative Art—The "Three-Pnase System"—Importance of Art Direction—Practical Plan for American Methods of Production to Fit With Leadership in Industrial Art

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THE elimination of waste in industry can be effected not only in those fields where the problem is purely an industrial engineering or mechanical one, but also, to a great degree, in those industries where art is an essential element and where frequent style changes tend to complicate the issue.

It is the purpose of this paper to present a practicable plan whereby the various factors which enter into the creation of an art product can be so coordinated as to secure comparative safety in large production for art industries, without sacrificing that leadership in creative ideas which must be taken if America is to occupy its rightful place in the world of industrial art.

Suggested Methods

The organization of art in industry may be effected through the following methods, which will be taken up in greater detail later in this paper:

1. A thorough and careful analysis of sales statistics in order to acquire a more scientific knowledge of public taste, the analysis of all products successfully marketed in kindred lines, a study of the speed at which the public can absorb new creations; and advance preparation of as large as possible a proportion of the product, leaving the way clear for the "news" part of the output which must necessarily be a last-minute operation, thus paving the way for

2. The "Three-Phase System" which is the keynote of the plan for eliminating waste and securing safety for quantity production in art industries. The Three-Phase System means the splitting up of the product into the three phases, devoting only one part to what might be termed the "launching," but which is really the "testing out" of novelties; and having the other "phases" consist of the right proportions of developed versions of the preceding year's successful creations; and developed versions of the successful things launched in kindred industries, to keep the mills busy and earn enough to finance the creative effort necessary in Phase I.

3. An intelligent and unified art direction, combining training in the arts and knowledge of markets and pubilc taste, which will guide the entire operation of the industry to the goal of a thorough understanding and proper interpretation and support of the "creation." Such direction to be centered in an individual who will have all of the qualities necessary to bring such an organization plan to a successful operation.

4. The establishment of national as well as international industrial art agencies for the classification and dissemination of art and fashion knowledge, which will guide creative artists as to trends and demands.

Before we proceed, however, to the detailed consideration of the elements involved in these major recommendations let us look for a moment at the situation as its exists today in the art industries.

What is it that must determine the measure of individual success of the appeal to the consumer in any given industry?

Starting from a like wage scale with like elements, like machinery and equipment, the efficient management of all those engaged in art industries may well have brought about a fair equalization of quality and price.

It is clear that were it not for the appearance of the manufactured product which is capable of many transformations, an appeal to the public on the sole basis of utility might bring indifferent results. Competition might lose much of its incentive, and the public might not be tempted to buy.

Yet, as soon as transformation begins, waste sets in again.

Why? Because unlike other elements, what is termed "Art" in American industry has as yet escaped the hand of the organizer.

Unorganized Industrial Art

American industry does not really attempt to watch and understand local and world influences in style and art as it does local world statistics in food stuffs or raw materials. And because of this it is constantly caught unawares and loses out. And because it has lost out much and often it has become timid, lacks initiative and tends to stifle creative effort.

In fashion industries there is the added complication of frequent style changes, necessitating more intensive application of trained artistry and very accurate forecasting.

We have on the one hand the flash of wireless telegraphy encircling the earth—distributing fashion and art news almost instantaneously,—and on the other hand, the ponderous machinery of large production moving at a necessarily slow rate.

The news distributing agencies play their part in keeping the public well

Henry Creange, Art Director of Cheney Bros.

informed, though unfortunately they create sudden and early demands, stampeding distribution which cannot proceed until further production is in full swing. And in a bedlam of misunderstanding, false starts and inaccurate information, industry in a mad rush to hold or control markets and because its product must undergo constant transformation, piles loss upon loss, waste upon waste.

It will not be attempted here to demonstrate that loss and waste can be entirely eliminated, but rather how to coordinate apparently conflicting forces and show how they may be used so that some measure of safety is secured.

Creative Effort in Large Industries

A thorough analysis of the conditions will reveal that there is no valid reason why creative effort should not function in large industry as well as it did in the past among artists and craftsmen, unhampered as they were then by important financial and national distribution problems.

Just as we can foretell that so many loaves of bread will be needed each day and so many bales of cotton consumed each year, so can we know also how many pairs of overalls our farmers will use. Perhaps we can also approximate how many yards of cotton or silk will be needed to clothe the women, how many pairs of shoes, etc.

But what kind of shoes, what color silks, what qualities of carpet, what style of furniture? To anticipate the demand is dangerous; to await it is fatal.

To proceed with understanding and safety, industry of all types makes use of statistics and requires full knowledge of markets, past performances, capacity of production, rate of distribution, etc.

Applying Statistical Methods

The application of artistry and individuality to any given product introduces elements which require further knowledge; that is, art of creation, art of design, craftsmanship, knowledge of public taste.

A close study of sales statistics broken up into very small units and grouped according to types will disclose many things of interest, among them that new *creations*, so called, could not monopolize the entire production of a mill without seriously affecting its sales. Certain types of design, certain kinds of colors, certain general lines, make a constant appeal to a certain public—each being in demand under slightly modified formulas year after year.

Other types, differing in appearance, and particularly those containing features to which the public has not yet become accustomed, are received with a varying degree of response, according to what part of the public the appeal is made.

The more a business deals with novelties, the greater the necessity for breaking up statistics into smaller units, and the more complicated the product and its style problems, the greater the need for this breaking up.

A thorough and careful analysis of

* From report of Commission appointed by Secretary Hoover to visit and report upon the International Exposition of Modern Decorative and Industrial Art in Paris.

sales statistics will show that a large part of the demand for any product is for things to which the public has already become accustomed. These are sometimes called staples. It will be found that the demand for these so-called staples varies but little from year to year and that they form the bulk of the demand in most productions. This is true even of such seemingly changing industries as those of fashions and styles. The news agencies disturb this demand very little. News items concentrate on new creations, which form a fitting subject for news. Staples go on undisturbed.

As a first step toward organization, it will be a simple matter to form a fair estimate of the demand for staples and prepare for it, giving the product its very best appearance but within well defined artistic limits. So to this extent, at least, the kind of shoes, the color of silks, the qualities of carpets, the style of furniture, may be foretold.

Analyzing Kindred Lines

Another phase of study which may easily furnish a further safe basis of information for advance manufacturing is the analysis of all products successfully marketed in kindred lines, statistics for which are not at hand, but which can, nevertheless, be gauged fairly accurately through knowledge of public response.

A thorough analysis of these leads, and applications of the trends thus indicated will form a second group of documentation for the preparation of a campaign based solely, as in the case of staples, on the anticipated continuation of a demand already in existence.

Thus by combining the knowledge of a certain demand for staples with the knowledge of a certain anticipated continuation of other existing demands, even manufacturers of novelties may, for a great part of their product, gauge future demand with a fair degree of accuracy, and safely prepare for it at such times as their creating and manufacturing capacity is least encumbered.

A careful study of the speed with which the public absorbs new creations and in what relation and in what proportion they are absorbed as compared with the creations that are not so new, will complete the cycle.

The danger that attends quantity production typical of American industry lies in the fact that the introduction of novelties when attempted is generally performed without relation to that proportion of the product that can safely be made new. By applying to industry in general the principle that underlies the making of a newspaper, for instance, comparative safety will be secured, and there will be more freedom to evolve toward what is really new.

Controlling the News Element

Much of a newspaper is prepared in advance. The latest news is put in the forms at the last minute. It is called a newspaper, but only a small fraction of what goes into print is really news. The news feature, however, makes the public buy.

No industry has to move faster than a newspaper, where in order to have it printed and ready for sale on time, that part of the paper which is not really news is prepared in advance. Advance preparation in any industry can and should be achieved through proper documentation, leaving the way clear for what is new as a last minute operation.

Constant observation of every possible manifestation that may influence trends, and an unremitting use of sales statistics have led me to adopt a system which seems to offer the greatest possible security to the manufacturer whose product is affected by style changes.

I have always called this the *Three-Phase System*, and for the sake of convenience will designate it here under the same name.

There is a widespread and mistaken idea that style changes occur over night. This is far from true. In nature, in history, in human endeavor, there are no sharp breaks, no sudden departures. The seemingly new has evolved slowly from the past; only those who do not read the signs fail to discern the link that connects the events of yesterday with those of today. The same is true of the changes that occur in various industries. Those who watch and register the stream of indications that flow from all sources, art magazines, art expositions, the stage, social functions, etc., are well aware that no change is really sudden.

Plenty of time elapses between the first appearance of a novelty and the vogue it achieves. The sale in becoming widespread establishes for the time being a new *staple*, born of so-called novelty, which new *staple* is in time displaced by another so-called *new staple*, also born of some other season's novelties. The process repeats itself indefinitely, some novelties dying out sooner than other luckier ones. These last, if they fill a permanent need, in time become those things known as the *staples*.

The Three-Phase System

The Three-Phase System is born of this endless cycle.

A manufacturer's line planned and made up in the right proportions of:

Phase I. Entirely new ideas—novelties.

Phase II. Developed versions of the preceding year's successful creations (including staples).

Phase III. Developed versions of the successful things launched in kindred industries.

has in it an element of safety not obtainable otherwise.

Phases II and III are really based on an identical theory, but because manufacturers are in possession of accurate knowledge in Phase II long before they can become acquainted with the elements needed for the preparation of Phase III, Phases II and III are classified under two separate heads.

The Three-Phase System is applicable to everything affected by style or fashion changes, forms, colors, designs. The proportion to be accorded each phase in the planning of lines is determined by conditions, policies, sales statistics, etc.

The system eliminates much of the element of chance that is found in launching novelties, limiting the main risk involved in really new creations to the proportion accorded with full knowledge to Phase I.

It permits of such advanced planning and assures continuous employment of the mill hands concerned with the research, designing and sampling. Often it allows advance manufacturing on a fairly safe basis.

It gives greater facility and freedom to the creative sections of manufacturing because:

1. The creative work is split over a longer period of time, the first part of it being made to cover Phase II, followed up by Phase III, and finally ending—at the last minute—with Phase I.

2. Phases II and III operate as a safeguard against loss of business resulting from too radical and too sudden changes in the product, and

3. The advance knowledge gained through the testing out of Phase I prepares material for the constant renewing of Phase II.

It is quite evident that were a large industry to attempt to creat novelty leadership, it could not possibly afford to risk its entire product on ideas that have not yet proved their worth with the public, and yet unless such ideas are tried out novelty leadership cannot be accomplished.

To split up the product into three phases, devoting only one part (Phase I) to what might be termed the "launching" but what is really the "testing out" of novelties, is to take an important step toward eliminating waste.

Phases II and III will bring sufficient business to keep the mill fairly busy and earn enough to finance the creative effort necessary in Phase I.

Even within this last phase (I) the Three-Phase System should be applied. For in a new creation it is entirely unnecessary, and even unsafe, that every element be novel.

To blend the old with the new, to embody some element that has already been accepted by the public, is to start that creation with a very fair chance of life. Creation that departs too radically from the past; that throws into the discard all that has gone before, is apt to be short-lived. The continuity of nature, the natural law that creates new forms step by step, by an evolutionary process in contradistinction to a revolutionary one, may well be followed in the industrial field. Very few understand this principle, but those few are achieving really worthwhile things and are doing constructive work.

So much for the splitting up of the creative effort in three phases.

News Must Not Regulate Creation

As to industry being upset and stampeded by fast-traveling news with which it cannot keep pace (particular reference is made here to news emanating from European markets that upsets the fashion industries), it will be well to keep constantly in mind that in all industries—whether their style changes occur more rapidly, as in the fashion industries, or more slowly, as in the furniture, pottery, metal, and other industries dealing with home furnishings—*creation, production* and *distribution* are linked in an indissoluble chain, and that it is the slowest unit—as is true of a fleet of battleships—that regulates the speed of the whole.

News should be registered, noted and catalogued. It will illuminate and guide creation, but it should not upset it. The knowledge that *distribution* can hardly start before *production* is in full swing, will give *creation* the necessary time and poise to study and perfect its ideas. Besides, most industries are limited in the launching of new ideas by well defined seasons. The seasonal demands are mile-posts which permit an orderly classification of ideas. Production, occupied as it is with filling the demands in Phase II and Phase III, can take up new trends one by one (independently of standard production), and slowly prepare for them.

To become—and remain—leaders in their particular field, rather than merely followers, the various industries must never cease taking up these new trends, and inasmuch as to do this they will first have to educate themselves, they will eventually pass on to the public the full benefit of this acquired knowledge through an intelligent and timely use of the news distributing agencies with which they are thoroughly equipped—focusing the light of publicity on their new accomplishments.

Experts in Art Direction

All of which points to the inevitable conclusion that American large-scale industry, just as it has in late years installed in its mills efficiency experts, attached to the accounting and production, and just as commerce has in the past decade acquired merchandising experts, should now maintain experts in Art Direction as part and parcel of its executive staffs.

Perfect harmony between ideas gathered from every avenue of thought implies very careful work, tireless labor and research, a thorough knowledge of the classics, refined and trained taste, a sense of tone, beauty and perfect technique.

If successful manufacturing and sales managing call for the assembling of many statistics and much information, so does the task of interpreting trends require statistical support and detailed knowledge of cause and effect. Artistry in industry is a thing capable of being analyzed, and artistic creation can be guided.

To be among those that lead requires considerable effort, costly in the extreme, and yet is the only possible solution of the problem. To follow is to be forced to hold up every phase of production, including often even the purchase of raw materials, until indications are at hand as to the plans of those who lead. The evils arising

from such a short-sighted policy are incalculable.

Leadership for America

America should now take her place among those nations bent on expressing themselves. No greater recognition may be given the French for their courageous enterprise than our acceptance of their courteous challenge, and opening wide our markets to them, which their creative initiative so richly deserves.

But ours need not be the rôle of lookers-on. America will slowly feel her way in this new expression of art but will not neglect it, just as she should maintain contact with all things created everywhere, developing at the same time her own creative genius.

Quantity production is not necessarily an obstacle to artistic effort or novelty creation.

When properly organized, the possibilities of large industry are greater than in smaller units, where all the revenue must often be earned out of a single item.

America should lead in the establishment of national as well as international industrial art agencies for the classification and dissemination of art and fashion knowledge, for nothing is so international as art. Organized art direction at home backed by art guidance and understanding from abroad ought to result in America taking her place among the nations who are making worthwhile contributions to the arts and trades.

We need take nothing which we are not prepared to pay back in full. Our own markets are practically unknown to Europeans. The exchange of ideas and information has always resulted in the elimination of waste and a gain in efficiency. Carried out nationally and internationally, the results must be constructive and helpful, as they must bring about greater understanding and greater prosperity for all concerned.

Conclusions

The demand for what is new on the part of the public is not as great as it appears; this is true even in such industries known as "Style Industries" in which "style" seems the moving factor.

On the other hand, the need for creating novelties on the part of the industries is greater than most manufacturers realize, even though we deal with "Staple Industries" in which "novelty" apparently plays no part.

This seeming paradox is easily explained.

If quantity production is what it implies, it means manufacturing in quantities for sale and distribution to quantities of people.

The safety in large production for the art industries lies in the fact that as in everything else new ideas are only accepted with time.

Now the need for ever-recurring novelty is more or less artificially created. Human nature is conservative at heart and does not really crave for change at the rate of speed forced upon it by manufacturers who are spurred on by competition.

With this truth before us, it is easy to deduce that there will be a certain amount of demand for that which has already become a habit; hence, one may manufacture in advance to fill that demand. But should one be tempted to argue that safety lies in manufacturing only the things that are thus demanded, it may be answered that price competition centers on these.

Individual initiative must be developed in the fields of "Art" and "Creation" just as it has been given its opportunity in other phases of American industry. The artist's effort must be fostered and he must be allowed to enter industry. That such cooperation is free from undue risks is demonstrated by the application of the *Three-Phase System.*

Efforts should be made to further individual initiative, and the formation of clubs and associations of industrial artists shall be encouraged.

In industry, statistics should be made available to the creative artists to guide them as to trends and demands.

A certain part of the production should be devoted by each manufacturer to research, the testing out of new ideas, and it shall be intrusted to men who have demonstrated their ability to cultivate new thoughts and create new effects.

The risks will not be great—they will involve only that part of Phase I that is within the means of each to undertake with safety.

To this effect—A larger discussion of the subject will be encouraged, that manufacturers may learn to direct their art policies toward:

1. Establishment of statistical information analyzing public reaction.
2. Gathering and classification of information concerning art and style tendencies in the making.
3. General adoption of the *Three-Phase System.*
4. Devoting a part of the production to the Novelty Phase.
5. Frequent contacts between creators for coordination of effort in all fields.
6. Definite creative programs to lessen the stampeding by news agencies.
7. Use of proper publicity to support creative effort.
8. Education of sales force, the middleman, the public, each in turn.
9. Introduction of the *Three-Phase System* in the merchandising scheme of the middleman.
10. Making foreign contacts where students may learn and technicians perfect themselves.
11. Exchange of information with foreign bodies.
12. Protection of designs in the United States, that creative effort the world over may receive its just measure of compensation and reward.

Style a Growing Factor in Minds of Textile Men

Development of Styling Too Often Subordinated by Manufacturers or Sellers Who Are Not Alive to the Profit Possibilities of Correct Styles—Ultimate Consumers Know What They Want and Must Be Catered To—Elements Entering Into Successful Styling—Suggestions for Stylers from Practical Distribution Standpoint

By L. G. Salembier

THE question of style and of styling is becoming a paramount matter in the textile industry. It is recognized that it is one of the principal issues to be considered in the profitable operation of textile plants. This is true in spite of the fact that such a large proportion of the yardage turned out by manufacturers is of the staple variety. It is recognized that many manufacturers in order to keep their plants in operation or to convert losses into profits must interject the style element into their product. The question of how this is to be done is exercising many minds in many directions today.

Styling Not Up to Date

The trouble with many lines of style goods is that pace is not kept with the times. The ordinary individual, especially of the weaker sex, seems to know style intuitively. It does not take a woman long to discover the fact that long skirts or high shoes or last year's hat are not the things to be worn this year. She follows the general style trend and does it so quickly that one wonders where she gets the information. This speedy adaptation of lines to changes in demand is not always the case with the man who is responsible for the product of a mill. He does not keep up with the times and the consequence is that his line does not meet with general approval. Of course, there are always exceptions but in too many cases lines of even the most prominent mills show a decided similarity year after year. The same general idea is incorporated in goods that have been shown by particular concerns for 20 years or more. The term "corporation goods" could not be effectively used were it not for a same general style trend that has been peculiar to this class of fabric to an extent that makes it possible for the buyer to tell these lines and to designate them as corporation goods. It may be a difficult matter to discard what has been popular in the past but the change in popular fancy makes such radical jumps that it is imperative equally radical moves must be made by fabric producers, and this is too often not the case in the textile industry.

What Makes a Style a Success

Of two stylers equal in ability, one may be a success and the other a failure. One wonders why this should be. There are various explanations, one or two of which may be in point. It is possible that the failure as a styler is caused because the individual in question does not style each fabric for a given outlet and for a special purpose. A fabric may be styled so that in the piece it shows no particular merit or attractiveness and yet when this fabric is made up into a garment it possesses everything that a good style should possess. Styles can be made for the jobbing trade that will not have the appeal to the cutter. Other styles will go best with the catalog and mail order houses, while still others can be produced with a special appeal to the youngster, to the flapper, etc. In other words, a large element in style is a knowledge of the trade to which the fabric goes, and the requirements of that trade must be known and studied as an entity. It is true that certain lines may be styled so that they can be distributed to a diversified trade but these are the exception and the individualistic opportunities of catering to a specific class of buyer are becoming more and more recognized by those who are making the question of style an intimate study.

Another Reason for Failure

An important point in determining upon style is to have a knowledge of the trend in garments. For instance, if the style trend should be toward pleated garments for the coming season, a fabric which does not take this into consideration in developing style might be utterly useless. On the other hand, plain draping garments demand another character of style which would be utterly out of place in a pleated skirt or dress. Beautiful designs may be a failure for the reason that they are not centered correctly. The position of the pattern on the fabric is not such that they can be made up to advantage by the dress trade. Again, certain designs may prove to be a failure because they cannot be cut up in quantities by modern cutting machinery as the patterns will not match on the seams. This should be taken into account when developing designs. In

the case of tailored garments, this feature is not a factor.

Styling Makes a Profit

It is not too much to say that style is the factor that makes or eliminates a profit to the mill. It is a psychological fact that a woman will always pay a better price to be dressed correctly than to purchase goods simply because they are cheap. It is not always intrinsic merit that sells a fabric. It is very easy to recall instances of where high priced goods made of the best yarns and durable as well as sightly have had to be sold for a cheap price, simply because they were not in style, whereas an altogether inferior fabric, costing very much less than the first may, because of a popular style, be marketed at considerably more than the first line, yielding naturally a much larger profit. It is useless to try to sell goods that are not in style, for the woman of today knows what she wants. She has been educated by magazines, newspapers, the motion pictures, by radio talks, fashion shows and numberless other means of informing her on what is the going vogue or what is going to be the style.

A Styler's Requisites

A good doctor is generally a poor business man. This cannot apply in the styling of textile fabrics. A styler must be an artist but he must be something more. He should be practical; he should know by intimate contact with the trade what the buyer is thinking about in the matter of styles and he should also know how to adapt the buyer's thought to his production in such a way as to bring about practical results. If necessary he should be in a position to create demand through propaganda or other means for a particular style if necessary. In other words, he should be an all around man, capable of adapting himself to conditions and alert to take advantage of every opportunity which presents itself. That such opportunities do come, those who have had long experience in the styling of goods know, but too often the styler is not alive to the possibilities nor to the practical results of effective pushing of certain lines. The successful styler also cannot expect to do his best in an office isolated from the rest of the world but must be daily in contact with centers of style activity. The successful leaders in the silk industry spend a large amount of money in sending their stylers abroad. They recognize the advantages to be obtained from getting first hand contact with, and information about, new styles at the place of origin. What proportion of the stylers representing cotton and wool goods mills ever go to foreign centers to gain inspiration or to find new ideas? The cutter and the converter are even ahead of these first-hand representatives.

Importance of Color

Naturally color plays a most important part in the styling of merchandise. With the mercurial changes that occur so frequently today, the styler must be in constant touch with the change in shades that are in immediate demand. Opportunities often occur during the season for re-dyeing fabrics and making what is an undesirable material into goods that may be sold at a profit by putting in the right shades at the psychological moment. This may go further and a redyed fabric may take on a different name when its color changes, to the advantage of said fabric. The buyer is not always an adept in the knowledge of fabrics; in fact he doesn't care very often what the technical name of a fabric is or as to its real construction as long as it is in style. For instance, when flannels were in large demand, thousands upon thousands of pieces of storm serges were sold as flannels. The buyer in instances may have known the difference but he was one with those who didn't know and didn't care as long as he could sell them to the consumer as flannels.

Possibilities in Cottons

The styling of silks is, as intimated above, very much superior to any other textile material, and for certain of the reasons given. This does not mean, however, that there is not the possibility of increasing the style factor in cotton fabrics to a marked degree. When combinations of cotton with silk, rayon, merino and worsted yarn are taken into consideration, it is easy to visualize a field that is much larger than the ordinary silk fabric can ever occupy. The cotton district, including Thomas, Worth, Leonard and Franklin streets, is not very inspiring for a stylist. If his day-to-day outlook is confined within these few streets he is not going to gain the inspiration for new ideas and new combinations of pattern and color that can be discovered by a constant contact with style centers and style producers in this country and abroad. Not only does such contact produce styling ability but gives new ideas and it would seem as though these ideas were conspicuous by their absence in this division of the trade. As an illustration, has anyone thought of the idea of producing on a plain fabric a ¾-inch or inch border along the selvage, without much if any additional cost? The idea embodied is that such a border could be used in the place of trimming and although the buyer might pay a higher price for it than he would for an ordinary plain cotton fabric, this increased cost would be offset by his ability to use it, if he be a cutter, in the place of trimming for which he would have to pay an additional amount. That same idea could be incorporated in fancy goods, the border being harmonious with the design. These borders could be used for trimming around the neck, cuffs, pockets, or as a belt. With the use of rayon a very attractive border might be devised with beautiful designs that would be as satisfactory as any trimming that could be employed.

It is just such little things that show the possibility of developing the matter of style out of a humdrum procedure into something that is attractive, practical and profitable.

Question of Over-Styling

Of course there is always the possibility of producing too many styles The slogan of the American manufacturer is mass production. In developing this idea he has made his profit and there is always the likelihood of developing too many lines, or too many shades, so that the individual orders will mean a loss of profit to the mill because of their multiplicity and small individual volume. While every effort should be bent toward producing the newest and most up-to-date styles, thought should always be given to concentration on the best of these styles in order to effect the maximum production at the lowest cost to the mill and yet always with an eye to attracting the consuming public to something that is in demand. Economies can be effected by those who know the technical savings which can be made. For instance the same warps may be used for both stripes and plaids. If a change in demand from one to the other takes place it is not necessary to produce entirely different warps, for what is made for one class of goods can be utilized for the other. Also savings may be effected by using combinations of colors that have been employed in other fabrics instead of producing entirely different shades. Such procedure is in line with the practice of combined efficiency and economy, so desirable in this as well as all other branches of manufacture. With all the talk regarding the proper solution of existing problems in the textile industry, very little has been said, at least in the papers, about this subject of styling. Proper consideration of the subject ought to go a long way toward improving the status of the trade, both in the manufacturing and distributing branches.

Uses for Raw Cotton

Investigation by Department of Agriculture Aided by Cotton Goods Trade

AN INTERESTING preliminary survey is being made under the auspices of the Department of Agriculture as to the uses of raw cotton. This survey is being conducted by Prof. Hugh B. Killough, head of the Department of Economics of Brown University. Prof. Killough has been conducting his research in the textile industry, both among mills and selling agents, with the idea of listing the most important channels into which the raw material goes. It is his estimate that fabrics represent practically 70% of the consumption of raw cotton and for this reason he is making a canvass of the industry, not with the idea of learning all the uses to which cotton may be put, but of cataloging a sufficient number and variety to impress the Department with the necessity for an intensive study of the subject. Prof. Killough has been engaged in this work since about the first of July. For the purposes of information to members of the Association of Cotton Textile Merchants of New York, a representative of the agency which has the matter of publicity for this association in charge is accompanying Prof. Killough in order to ascertain data which may be of benefit not only to his agency but to members of the association as well as in whatever future activity may be determined upon.

Purposes of Survey

As Prof. Killough explained to a representative of TEXTILE WORLD this week, the Department of Agriculture appreciated that the cotton farmer knows very little about his product after it leaves his hands. He did not know how it was used or into what commodities it went. He also discovered in his talks with the cotton goods trade that much the same ignorance existed in the minds of fabric manufacturers and selling agents regarding the ultimate uses to which fabrics they produced or sold were put. While voicing his appreciation of the cooperation received from members of the trade, he believed that if and when the report which he would recommend is finally published it would prove not only a matter of interest to the textile industry but one of vital importance. This belief is shared by officials of the Cotton Textile Merchants, who are anxious to find new uses for cotton goods but who understand that these new uses cannot be discovered or developed until the present outlets are well known and classified.

Hoped-for Result

The tabulation of various cloths which Prof. Killough is making gives the yarn counts and where possible the length of staple on the one hand and the uses to which each specific cloth is being put. Classification is made according to length of staple used, dividing into fabrics made from cotton below 1 inch in length, those from cotton from 1 in. to 1⅛ in. and those from cotton above 1⅛ in. in length. The idea of this tabulation is to prepare a guide on which the intensive investigation may be made in the future, based on the proposition that farmers can operate more efficiently on clean cotton of a specific length of staple if they are informed what proportion of the crop should be made of a particular kind and character. Also it would enable the farmer to make more of a profit, knowing what proportion of the different lengths of staple are usable in the various fabrics turned out by cotton mills. At present, as Prof. Killough well states, the cotton grower doesn't know anything

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The Steam Accumulator in Textile Mills

Fluctuation of Demand for Process Steam Causes a Low Load Factor on the Boilers and a Waste of Exhaust Steam —Principle and Construction of the Ruths Steam Accumulator—Method of Control—Determining the Required Storage Capacity—Effect on Cost of Plant—Application to Textile Mills

By Charles L. Hubbard

MANY textile mills require large quantities of steam for processes. The demand for this steam is generally very irregular, making it necessary at times to force the boilers beyond their economical capacity. During other parts of the day the requirements are light and the load factor correspondingly low. In many large plants it is necessary to carry standby units ready for cutting into service at times of peak load, all of which tends to lower the operating economy of the plant. Where non-condensing engines or turbines are used, and the exhaust is employed for heating and process work, there are often periods of considerable

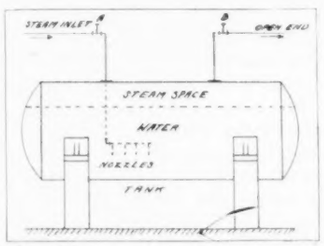

Fig. 1. Illustrating the Principle of the Steam Accumulator

length when much of this exhaust cannot be utilized.

The Steam Accumulator

Ruths steam accumulator, recently introduced into this country, furnishes a simple method of equalizing the load on the boilers and storing the surplus exhaust during periods of light demand for heating, to be given out again when needed. This device is now being used in several hundred industrial plants, mostly in Europe. It has been definitely out of the experimental stage since 1920, but its introduction into this country is of comparatively recent date.

The principle upon which the accumulator operates is as follows: If water is confined under presure and at the corresponding saturation temperature in a closed vessel, and the pressure be released, part of the water will be evaporated into steam by heat given up by the remainder, due to the drop in pressure and the corresponding drop in the saturation temperature. This action is made clear by the illustration at Fig. 1.

Let this represent a closed tank containing 5,000 lbs. of water at a temperature of 60 deg. and zero gauge pressure, the valve B being open to the atmosphere. Close B and open A, thus admitting steam at 100 lbs. pressure and 338 deg. temperature, through a series of nozzles, which condenses it as fast as it enters and thus heats the water. When the temperature of the latter reaches that of the steam (338 deg.) the space above the water will be filled with vapor at a pressure of 100 lbs.

Now close valve A and open B slightly. The result will be that steam will continue to flow from the tank at a constantly falling pressure, although no heat is being supplied, until the water reaches a temperature of 212 deg., which is the boiling point at atmospheric pressure (zero gauge) and which now exists in the tank.

To raise the temperature of 5,000 lbs. of water from 60 to 338 deg. requires $(338-60)\times 5{,}000 = 1{,}390{,}000$ B. T. U., which, in turn, requires the condensation of $1{,}390{,}000 \div 880 = 1{,}580$ lbs. of steam at 100 lbs. pressure; 880 being the latent heat. (In this computation the heat contained in the condensed steam has been omitted for simplicity.) In the above illustration, 1,390,000 B. T. U. have been absorbed by the water, but only $(338-212)\times 5{,}000 = 630{,}000$ B. T. U. have been given out, the remainder being required to raise the temperature of the water from 60 to 212 deg.

Working Range

In its practical application, the working range is commonly limited at the lower end by the maximum pressure required for process work, and a sufficient increase allowed to give the necessary storage capacity without too large a volume of water.

In looking over data which has been used in textile mills, we find that the following pressure ranges have been employed in the accumulator:

Maximum	Minimum	Range
171	57	114
170	35	135
142	43	99
142	35	107
142	21	121
114	50	64
114	43	71
114	35	79
114	28	86
100	57	43
100	35	65
100	28	72
92	20	70
70	35	35
57	14	43
50	20	30
43	14	29
43	7	36

In other industries the minimum pressure is brought down to 5 to 10 lbs., or just enough for warming the buildings and heating water.

Take, for example, a working range running from 35 to 100 lbs. gauge pressure, which corresponds to a minimum water temperature of 281 deg. and a maximum temperature of 338 deg., or a difference of $338-281 = 57$ deg. If 1 B. T. U. will raise the temperature of 1 lb. of water 1 deg., then each pound of water will absorb 57 B. T. U. in changing from a temperature of 281 to 338 deg. Assuming 1 cu. ft. of water to weigh 60 lbs. it will absorb, or give out, $57\times 60 = 3{,}420$ B. T. U. in passing through a temperature range of 57 deg., or a pressure range of $100-35 = 65$ lbs. Neglecting the heat and weight of the condensate, this will give a storage capacity of $3{,}420 \div 880 = 4$ lbs. of steam (nearly) per cubic foot of water.

The above computations are based upon close approximations for the sake of simplicity, but are not exact.

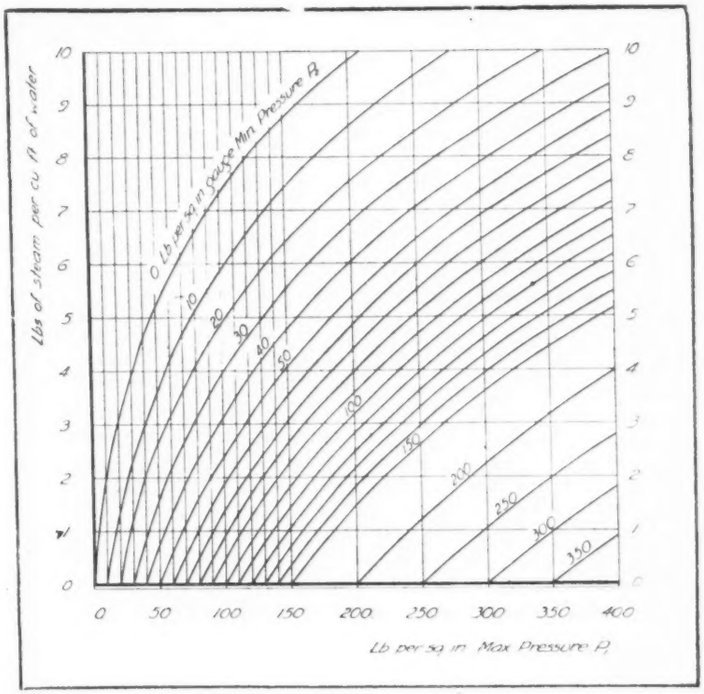

Fig. 2. Curves for Determining the Storage Capacity in Pounds of Steam per Cubic Foot of Water for Different Pressure Ranges

The curves in Fig. 2 take into account various other refinements and may be used in determining the size of accumulator tank for any given storage capacity and assumed pressure.

Finding Storage Capacity

For example, to find the storage capacity in pounds of steam per cubic

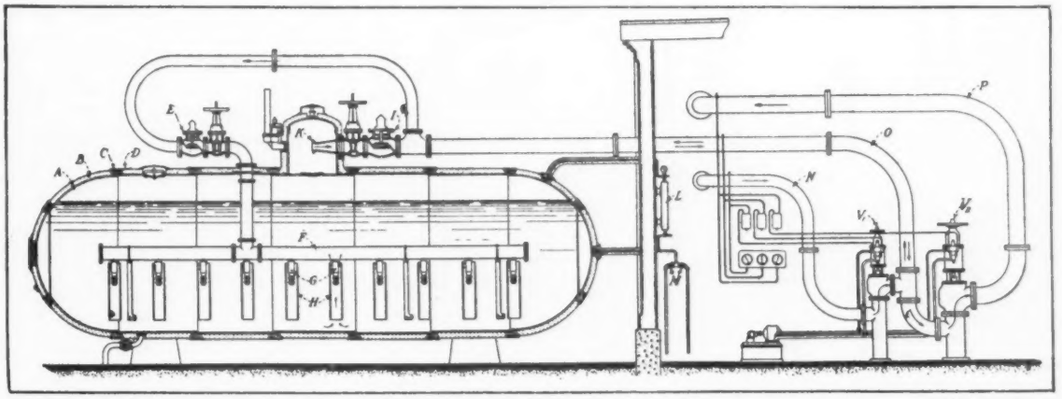

Fig. 3. Detail of Ruths Steam Accumulator

foot of water between a maximum accumulator pressure of 130 lbs. and a minimum pressure of 30 lbs., start at 130 on the base line in Fig. 2, and follow the vertical line until it cuts the curve marked 30. Then follow horizontally to the scale at the left, where we find that 5 lbs. of steam at 100 lbs. pressure will be stored per cubic foot of water, in raising the accumulator pressure from 30 to 130 lbs. The equivalent heat, in steam ranging from 100 to 35 lbs. pressure, will be given out again (neglecting the small radiation losses) when the accumulator is discharged.

If it was desired to store a maximum of 40,000 lbs. of steam at one time, the tank should contain $40{,}000 \div 5 = 8{,}000$ cu. ft. of water, or a total volume of about $8{,}000 \div 0.9 = 9{,}000$ cu. ft., in order to allow sufficient steam space above the surface of the water. Accumulators have been built in sizes ranging from 200 to 13,000 cu. ft., but where the required volume exceeds 10,000 or 12,000 cu. ft., it is usually better to divide it between two or more tanks according to requirements. In a large plant requiring a volume of 37,000 cu. ft., and a storage capacity of 150,000 lbs. of steam, three tanks were used.

Construction of Accumulator

The general construction of Ruths steam accumulator is shown in Fig. 3, the storage tank being at the left and the automatic valve equipment, called the "switchboard," at the right. The tank is constructed of steel plates and is cylindrical in form, with hemispherical ends. Its general appearance and method of support are more clearly indicated in Fig. 4.

Going back to Fig. 3, the letter A shows the steel shell; B is a covering of insulating material 3 or 4 in. in thickness; C a block covering over the riveted joints, which can be easily removed for purposes of inspection; and D is a light sheet-iron lagging. Owing to the small exterior surface compared with the volume, the heat-loss by radiation is negligible when constructed as noted above. Under ordinary conditions the tank is located out of doors, thoroughly insulated and weather-proofed, while the switchboard is placed inside, as indicated in Fig. 3. The shell is supported upon four steel brackets resting upon concrete piers, and so placed as to distribute the weight and also provide for all movements due to expansion and contraction.

The accumulator is equipped with fittings for charging and discharging the steam through a single pipe connection indicated at O. In action, the non-return valve E admits charging steam to the internal distribution pipe F, and the nozzles G, which are equipped with circulation pipes H to insure a uniform heating of the water. The discharge of the steam takes place through the non-return valve I. In case of an emergency, such as a rupture in the steam piping, the maximum discharge of steam is limited by the nozzle K to an amount which will prevent priming and a rapid emptying of the accumulator.

Control Arrangements

Before calling attention to the switchboard at the right in Fig. 3, let us consider briefly the principles employed in automatically charging and discharging the tank under actual working conditions. This is best done by reference to Figs. 5 and 6.

Fig. 5 shows a common method of supplying low-pressure steam for process work in an industrial plant, in which case it is assumed that the exhaust from the engines passes into the radiating system in the winter, and is condensed in the summer. Under the conditions shown, steam is generated at 150 lbs. pressure and reduced by means of a regulating valve, RV, to 25 lbs. for process work. This arrangement is wasteful in two ways: First, no power is generated by the steam in passing from a higher to a lower pressure; second, the demand for process steam usually varies widely so that the load on the boilers must fluctuate between extreme limits, which tends to low operating efficiency.

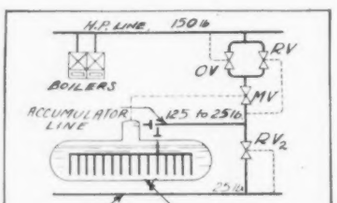

Fig. 6. Showing the Use of the Steam Accumulator in a Plant Illustrated in Fig. 5

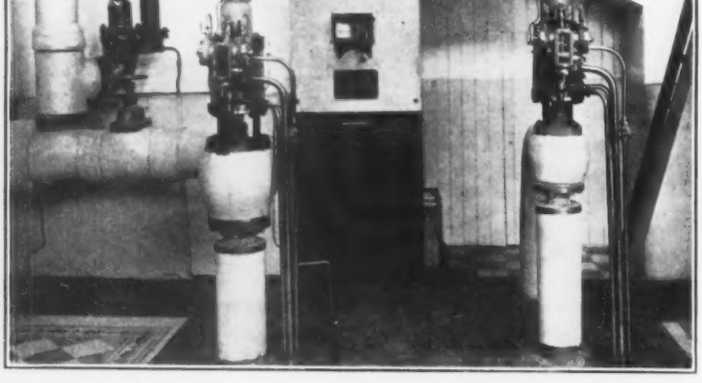

Fig. 7. Automatic Equipment at Switchboard for a Large Textile Mill

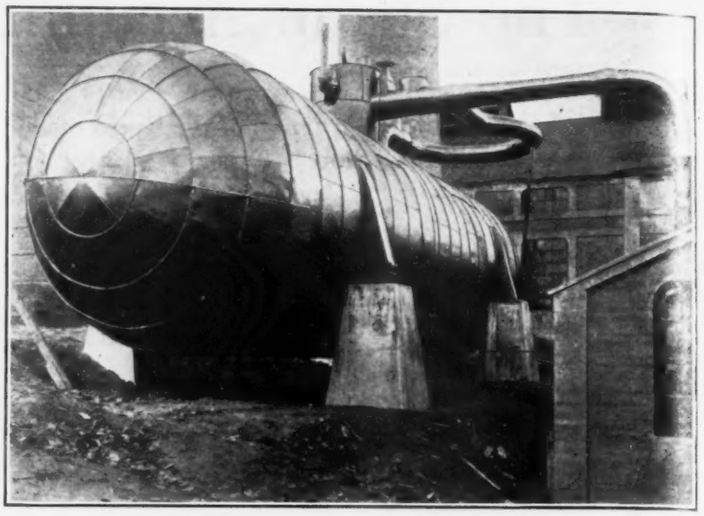

Fig. 4. Exterior View of Accumulator Showing Method of Support

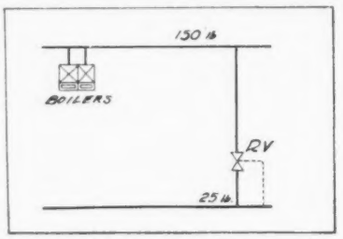

Fig. 5. Usual Method of Supplying Process Steam

The same plant with the introduction of an accumulator and its auxiliary equipment is shown in Fig. 6. Here OV is an overflow or relief valve which opens automatically and allows steam to pass into the accumulator line when the pressure in the boiler main rises slightly above 150 lbs., and before the safety valves blow. A reducing valve is shown at RV which by-passes steam around OV whenever the pressure in the accumulator line falls to 25 lbs. At RV_2 is a second reducing valve which maintains a uniform pressure of 25 lbs. in the process line regardless of the pressure in the accumulator line. At MV is an automatic throttle valve which prevents the pressure in the tank from rising above 125 lbs., the maximum for which it is built in the assumed case. Ordinarily this valve remains open, and only comes into action under the conditions stated above.

Principles of Operation

In operation the boilers are run at a uniform capacity equal to the average demand for steam, based on a full day. If at any time this exceeds the total steam requirements of the plant, valve OV opens and passes the surplus into the accumulator line, where any excess over that required for process work is condensed in the water of the tank, or in other words, goes towards charging the accumulator. On the other hand, if the demand for steam exceeds the normal output from the boilers, the pressure in the main will drop slightly below 150 lbs., in which case valve OV will close and the pressure in the accumulator line fall correspondingly. When it reaches a point below that existing in the accumulator tank, check valve I (Fig. 3) will open, and steam will be discharged from the tank to make up the deficiency.

When the overflow through OV, and the steam demand through RV_2 are equal, steam neither passes to nor from the accumulator; but when the flow through them is unequal, the accumulator either charges or discharges to equalize conditions. In the actual apparatus valves OV, RV and MV are combined in a single device shown as V_1, in Fig 3, in which diagram RV_2 is shown as V_2.

Referring now to the switchboard arrangement in Fig. 3, N is the high-pressure line from the boilers; O is the line to and from the accumulator; and P is the low-pressure main leading to the heating system or supplying the various departments with process steam. The simplicity of the equipment at the switchboard for a large textile mill is shown in Fig. 7, which is from an actual photograph.

Water Storage in Boilers

A sudden call for steam on a boiler causes a drop in pressure below that normally carried, which in turn leaves the water at a temperature somewhat above the boiling point at the lower pressure. This causes a rapid evaporation, the latent heat being taken from the water, thus bringing its temperature down to the boiling point corresponding to the lower pressure. In the meantime the effect of opening the furnace drafts is beginning to be

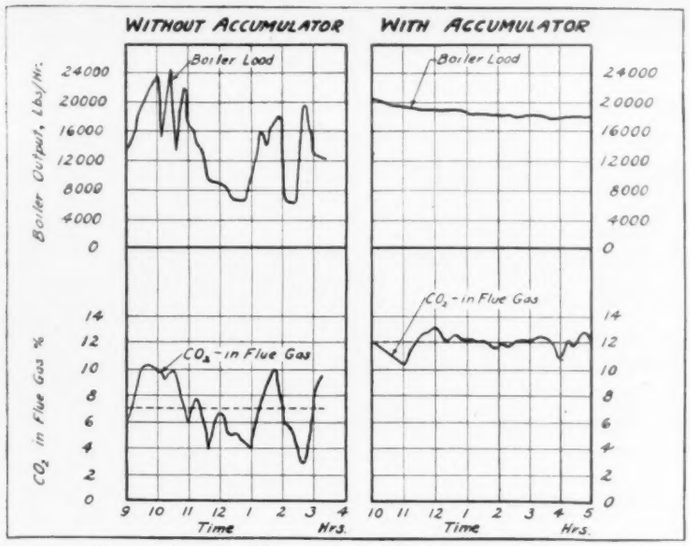

Fig. 8. Showing Effect of Accumulator on Boiler Output

felt, and heat for further increase in steam output will come from the furnace.

Theoretically, the water storage capacity of a boiler should be such that sufficient steam can be generated from contained heat, until the furnace can respond, without lowering the pressure a sufficient amount to interfere with the action of the engine or turbine. As a matter of fact, water storage capacity and quick response to furnace changes operate against one another and cannot be combined in the same boiler. For example, the older type of fire-tube boiler has a comparatively large storage capacity, but makes steam more slowly in response to draft changes than the modern water-tube boiler with its limited storage.

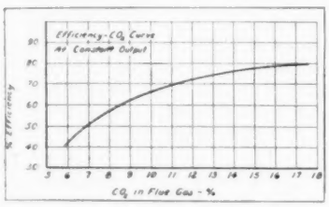

Fig. 9. Effect Upon Boiler Efficiency of Increasing CO_2 Content

In addition to this, it would be very expensive, if not mechanically impossible, to greatly increase the storage capacity with the high steam pressures carried in the modern plant. Furthermore, the storage capacity of water is much greater at lower temperatures and pressures than at high. For example, by referring to the curves in Fig. 2, we find that a drop in pressure from 300 to 250 lbs. will generate 1 lb. of steam per cubic foot of stored water, without heat from the furnace; while the same drop of 50 lbs., from 60 to 10 lbs. pressure, will generate 4.2 lbs. of steam per cubic foot of stored water. From this it is evident that by combining the steam accumulator with the modern high-pressure boiler, with minimum storage space, we have ideal conditions for uniform output at maximum efficiency. Owing to the absence of tubes and the lower pressure to be provided for, storage capacity can be obtained in the Ruths accumulator at about 1-50 of the cost for a like amount in a high-pressure boiler.

Storage of Surplus Steam

What has been said above refers simply to the benefits of uniform load and the ability to operate the boilers continuously at the point of highest efficiency. An equal, and perhaps greater advantage in some cases, may come from the ability to store exhaust steam at times of peak power load, or of minimum heating demands, for use when conditions are reversed.

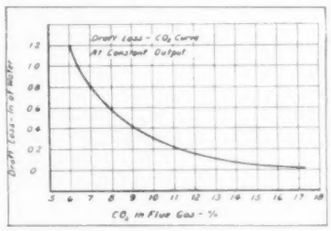

Fig. 10. Effect Upon Draft Pressure of Increasing CO_2 Content

In textile mills usually two or more different steam pressures are required: for instance, one pressure of, say, 55 lbs. for drying and finishing processes, and another pressure of, say, 5 lbs. for heating purpose, dyeing, etc. In this case the accumulator would be arranged to work in the pressure range from 55 to 5 lbs., and the prime mover to work from boiler pressure against 55 lbs. back pressure. If desired, additional prime movers may be arranged to work from boiler pressure or from the 55 lb. pressure to the 5 lb. pressure. By storing excess steam from the high back pressure prime mover the accumulator equalizes between the demand for power and for process steam and thus greatly increases the output of by-product power from process steam.

The practice of first passing process steam through non-condensing engines or turbines and thus obtaining power as a by-product, is one which adds decidedly to the economy of the plant when it can be carried out under suitable conditions. In the average case, power may be produced in this way at about 25% of the cost with straight condensing equipment. The usual difficulty with this arrangement is that maximum demands for power and steam do not often come at the same time, and very seldom balance, so that live steam must frequently be bypassed around the turbine through a reducing valve at certain hours of the day, while at other times there may be a surplus. With an accumulator installed in plants of this kind all fluctuations in both power and steam demands are taken care of automatically and without waste of heat.

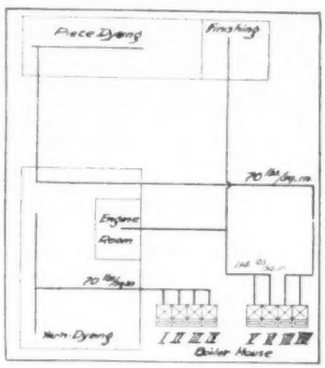

Fig. 11. Piping Diagram of Textile Mill Before Installation of Steam Accumulator

In certain textile mills large quantities of hot water are required for processing and usually the maximum demand for steam comes during the early forenoon, making it necessary to operate additional boilers during this period or to force the regular units beyond their economical capacity. In cases of this kind the boiler plant can be operated at average capacity, throughout the day, and the surplus live steam and any high-pressure exhaust which may be available from time to time stored in an accumulator for use the next morning during the hours of maximum demand.

Effect on Cost of Plant

Taking everything into consideration, both the capital and operating costs of a new steam power plant will be considerably reduced by the adoption of an accumulator. First, a smaller boiler house and less boiler capacity will answer for a given purpose, because the plant can be operated continuously, at 100% load factor, and stand-by units are not required.

Furthermore, the action of the accumulator equipment is entirely automatic, and the operation of the power plant considerably simplified, so that there should be a substantial saving in labor. When the boilers are operated continuously at the normal load for which they are designed, the upkeep of the furnaces and their equipment will be reduced to a minimum, due to a reduction in the expansion and contraction ordinarily produced by fluctuating loads. In the case of existing plants, where it becomes necessary to increase the capacity, it will usually prove considerably more economical to install an accumulator than to add boilers.

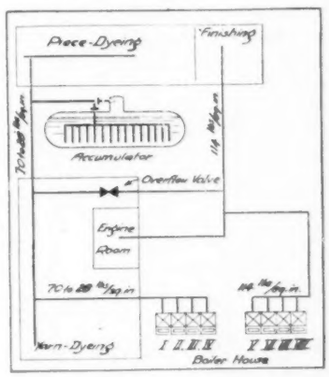

Fig. 12. Same Plant as Shown in Fig. 11 With Accumulator Installed

In general, the capacity of a plant may be increased 30% or more by this method, and fuel savings of 10 to

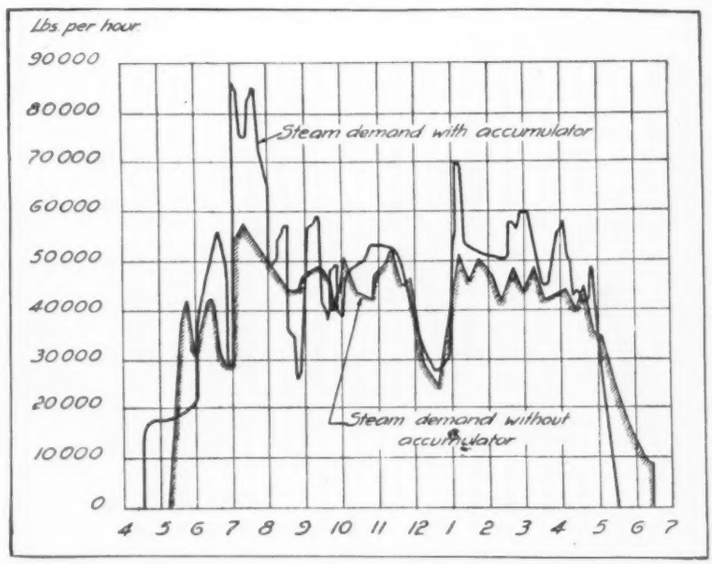

Fig. 13. Steam Curves for the Textile Mill Shown in Figs. 11 and 12

30% have been realized in many plants. This is brought out graphically by the curves shown in Fig. 8, which are plotted from tests upon a boiler plant before and after installing an accumulator. This increase in capacity and efficiency is due to the benefits of uniform firing, which is reflected in the greater percentage of CO_2 found in the flue gases.

The general effect upon boiler efficiency of increasing the CO_2 content is shown by the curve in Fig. 9, and that upon the draft pressure in Fig. 10. Both of these results are extremely desirable, and are brought about by the uniform firing conditions made possible by the use of an accumulator.

Application to Textile Mills

The practical application of the accumulator to an existing textile mill is illustrated diagrammatically in Figs. 11 and 12, the first of which shows the piping layout before the accumulator was installed.

In Fig. 11, boilers I, II, III and IV were used to supply steam at 70 lbs. pressure to the yarn-dyeing department. Boilers V and VI supplied the engines and finishing department with steam at 114 lbs. pressure; and boilers VII and VIII supplied the piece-dyeing department with steam at 70 lbs. pressure. The total installed capacity was 1,010 h.p., which was not sufficient to do the work, and an extension was considered. By installing an accumulator and making slight changes in the piping, as shown in Fig. 12, the same boiler plant was able to do the work easily and at the same time increase the quantity of electric energy produced.

In the second arrangement, boilers V, VI, VII and VIII are operated under a constant pressure of 114 lbs. The steam not required by the engines is passed through an overflow valve to the low-pressure steam lines, which also receive steam from boilers I, II, III and IV. The accumulator is connected with this line, and has a working range varying between 28 and 70 lbs., which is also carried simultaneously in the low-pressure boilers and the connecting pipe line.

The operation of the system is as follows: If the steam consumption on the high-pressure (114 lbs.) line rises, or the boiler output decreases, the overflow valve closes automatically, thus retaining the full power of the high-pressure boilers for service on this line, only the surplus passing into the low-pressure line through the overflow valve. If a peak demand occurs in the dyehouse which cannot be supplied by steam from the low-pressure boilers and the overflow valve alone, the accumulator will discharge a sufficient amount to make up the discrepancy. If at any time the steam consumption drops below the rate of supply, the accumulator will be charged.

In Fig. 13, the shaded curve shows the steam available and used before the accumulator was installed, and the plain curve shows the supply afterward. The areas included by the plain curve above the shaded curve represent steam supplied which was needed and could not be furnished before the accumulator was added. In other words, in this case it was necessary to curtail production due to the limitations of the steam plant. The accumulator establishes a "steam reserve" which eliminates such production losses. Steam stored when demand is sub-normal is instantly available at uniform pressures to meet peak loads.

Invention of the Fly Shuttle

John Kay, Father of Modern Textile Machinery, Increased Loom Efficiency in 1733, Necessitating Spinning Improvements

*By Robert E. Naumburg, A.B., S.D.**

WHAT Columbus did for geography, what Galileo did for astronomy, John Kay of Bury, England, did for the development of textile machinery. Each marked the beginning of a chain of discoveries of inventions which divided modern times from the past. Each had to face great opposition from his contemporaries. Each made contributions to progress which were too great to be appreciated by his own generation. Of these three men, John Kay was the only Englishman, and of these three men, John Kay's name alone has not yet found its way into the Encyclopedia Britannica.

Thirty-six years before Watt's invention of the steam engine, Kay started textile machinery on the road to mechanical efficiency. The spinning wheel and the loom had existed for thousands of years practically without improvement. Oriental countries had used these devices for generations, and accepted them as fixed and unalterable. It is to Europe's credit that, when the idea of improving them finally did take root, it occurred there.

John Kay's British patent on his fly shuttle was granted in 1733. It was the means of increasing the production of the loom four times. This not only had a very direct effect on weaving, but at once upset the relationship between the yarn supply and the loom capacity.

The effect was similar to that brought about by Eli Whitney's invention of the cotton gin sixty years later. Both mechanical improvements brought with them tremendous economic consequences. It is not too much to say that the increased efficiency of the loom due to John Kay's fly shuttle made necessary the inventions of spinning machinery by Wyatt, Paul, Highs, Arkwright, Hargraves and Crompton.

A description of Kay's fly shuttle is to be found in a book published in 1823, "A Compendious History of Cotton Manufacture," by Richard Guest:

"By this invention, the lathe (lay) was extended a foot on each side of the warp, in which foot an impetus was given to the shuttle by means of the picking peg, held in the weaver's right hand, which drove it across the warp and back again without being thrown by the workman's hands."

This method of throwing the shuttle enabled one man to weave the widest cloth, instead of being limited by the distance which his hands could reach.

Kay's invention was greeted with anger by the population in general and by the weavers in particular. Later, his fly shuttle was used by manufacturers who paid Kay nothing for it, and formed "shuttle clubs" to resist any suit that Kay might bring. He died in poverty in France in 1764.

In spite of his father's discouragements, it is interesting to note that Robert Kay, the son of John Kay also made one of the most important improvements in weaving—the drop-box for the loom, which allowed the weaver a choice of three bobbins for filling.

To return to the fly shuttle of John Kay, this was not only a brilliant improvement in weaving, but it meant the beginning of modern textile machinery, and as no industry developed labor saving equipment before the cotton, flax and woolen industries, the invention of John Kay meant the dawn of the new mechanical age.

Here is another of the series of articles on basic patents in the textile industry prepared for TEXTILE WORLD by Robert E. Naumburg, consulting engineer.

John Kay of Bury, England, made the first important mechanical improvement in textile machinery in modern times. His invention (at first strenuously opposed, but gradually accepted) upset all traditions in regard to the labor required for weaving, and prepared people's minds for the vast procession of labor-saving improvements which were soon to follow.

* Consulting Engineer, Winchester, Mass.

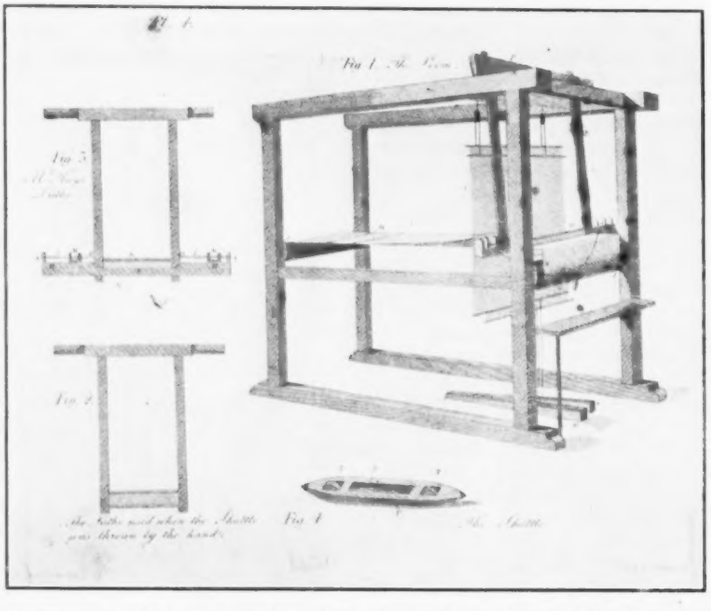

Illustration of Kay's Fly Shuttle in Richard Guest's "A Compendious History of Cotton Manufacture," Published in 1823 (Courtesy of Boston Public Library)

Engineering Societies to Meet

During the week of the National Exposition of Power and Mechanical Engineering in New York, Dec. 6 to 11 two important technical meetings will be held, one by the American Society of Mechanical Engineers and one by the American Society of Refrigerating Engineers. The meeting of the mechanical engineers will last four days from Dec. 6 to 9, and will be made up of 25 sessions held at the Engineering Societies' Building. The refrigerating engineers will meet at the Hotel Astor from Dec. 7 to 9. The sessions of both meetings are arranged to give those attending an opportunity to visit the Power Exposition at the Grand Central Palace.

Goodall Wool Sorters Hold Outing

SANFORD, ME.—The Goodall Worsted Co. wool sorters held their annual field day at Sebago Lake. A full course chicken dinner was served at Sandy's Cold Ice Camps, and a baseball game, boating, fishing and other sports were enjoyed. Hubert Hardwick in competition with several others won the golf honors. Tom Bates won the cup at "Tee-pit." The eating championship was won by Maurice Gumpert, while Leach Benn not only caught the largest salmon but also the most fish.

Electrical Refrigeration in Textile Mills

Principles Employed in Construction of Equipment—Importance of Care in Lubrication—Oil Recovery in Sulphur Dioxide Plant—Explanation of Liquid-Gas-Liquid Cycle—Discussion of Various Refrigerants Used —Description of Installation for Cooling Drinking Water at the Marland Mills, Andover, Mass.

By F. W. Sturtevant

MECHANICAL refrigeration, dependent upon electrical power and rapid evaporation of a liquid, is a comparatively recent introduction of the engineering chemist, and from early indications there is a place for it in the field of textile manufacturing as well as in other industries and for household purposes. Isolated cases where cooling and freezing were accomplished through the sudden expansion of a low-boiling liquid into a gas have been known for centuries. Indeed, the early inhabitants of African desert regions and Egypt are said to have produced flavored ices by exposing water in an open vessel to the hot, dry air.

It remained, however, for alert engineers to make use of this chemical phenomenon and design an ingenious electro-mechanical apparatus wherein the heat absorption occurring with evaporation is controlled in an easily installed unit which is practical for purposes such as air or water cooling on both large and small scales.

The widespread interest in electro-mechanical chemical refrigeration brings up the question of possible uses of such equipment by textile mills. A recent installation of three complete units of this apparatus in the Marland Mills of M. T. Stevens & Sons Co., Andover, Mass., is described in this article. This installation was primarily for supplying refrigerated water for drinking purposes, but there naturally follows the thought as to whether such cooling systems can be advantageously installed in textile mills for other purposes, such as cooling process solutions, materials used in processes, room temperatures, etc. Following this first article covering the principles of electrical refrigeration and the Marland Mills' installation, the author proposes to prepare another article of a more or less speculative character on further possible uses.

Operation of Cooling Element

Conditions and effects of changes in various factors were studied exhaustively until finally a closed system was devised wherein this liquid-to-gas expansion was utilized for commercial cooling purposes. A coil of copper tubing, shown at A in Fig. 1, is used for the cooling unit. It is in this coil and the box-like compartment B, directly over it, that the refrigerant (sulphur dioxide, methyl chloride, ethyl chloride, ammonia, etc.) which is forced up through pipe M from the reservoir G is allowed to expand from a liquid to a gas, through boiling. The vapor, ladened with heat absorbed from the surrounding air, is drawn from compartment B through a copper tube to the compressor C, where it is subjected to pressure by the piston D in the compressor cylinder E. When the gas is compressed it condenses again in the coils F to the original liquid form, losing its heat to the condensing coil cooling medium (air or water), and runs into the reservoir G, there to await a recurrence of the cycle.

A float valve L is placed in the expansion compartment B to regulate the flow of the liquid refrigerant into the cooling coil. Thus maintenance of pressure on the liquid line with consequent retention of the refrigerant as a liquid, and at the same time assurance of replenishment of the supply of liquid in the header compartment, is obtained. Vaporization of liquid takes place all of the time, but of course is much more vigorous when the compressor is running, since the suction created by the compressor tends to decrease the pressure set up by the evaporating liquid in B, lowering the boiling point of the liquid and causing increased vaporization.

The compressor is very similar in construction to an internal combustion engine, and hence must be lubricated in much the same manner, both to eliminate friction between the piston and cylinder and to form a gas-tight seal between the piston and cylinder. When sulphur dioxide is used as the refrigerant, there is a tendency for the gas to carry oil from the bottom of the crank case of the compressor and retain it while being condensed to the liquid form. Since the liquid boils in the cooling coil, the oil is released from it and floats in the header on the liquid surface. In order to return the oil from the top of the cooling unit to the compressor, holes are made in the gas return pipe N, and the oil runs back to the crank case when the oil level reaches these holes.

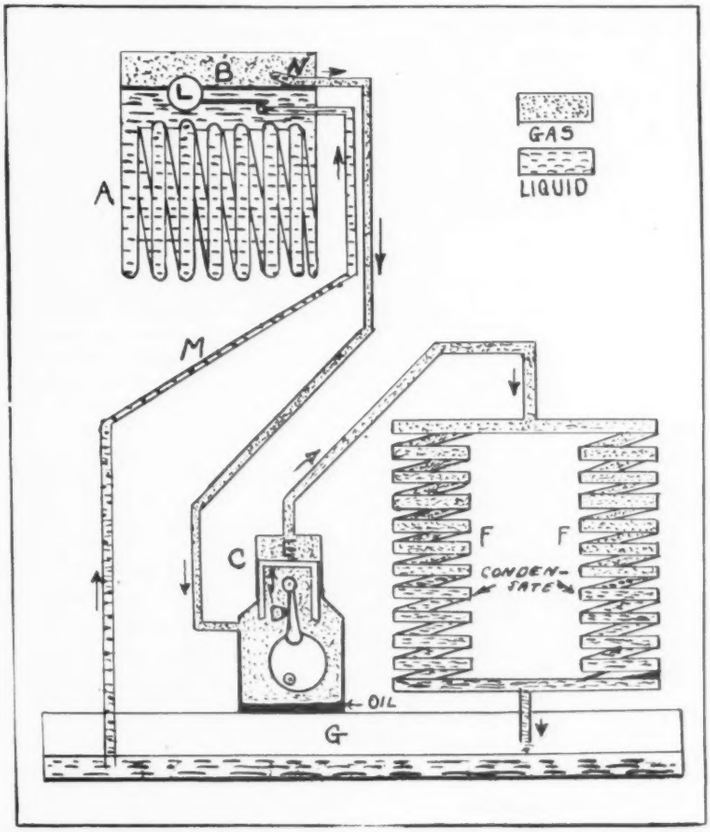

Fig. 1. System in Which Expansion of Low-Boiling Liquid Accomplishes Cooling

Various Refrigerants Used

Of the low-boiling liquids, ammonia (NH_3) was the first to be used for commercial cooling. At present the large ice cream manufacturers, creameries, and even theaters are using liquid ammonia as a refrigerant. Its boiling point is —28 deg. F., so that there is very rapid and intense vaporization when liquid ammonia is liberated. The high heat equivalent of evaporation is also favorable to the use of this compound. A condensing pressure of between 150 and 200 lbs. per square inch necessitates very heavy construction of compressors and tubes. Ammonia has a deteriorating effect upon such metals as copper and brass, hence these cannot safely be used with this cooling medium. A comparatively small amount of liquid ammonia accomplishes great refrigeration, hence this is used in large, bulky, commercial cooling plants.

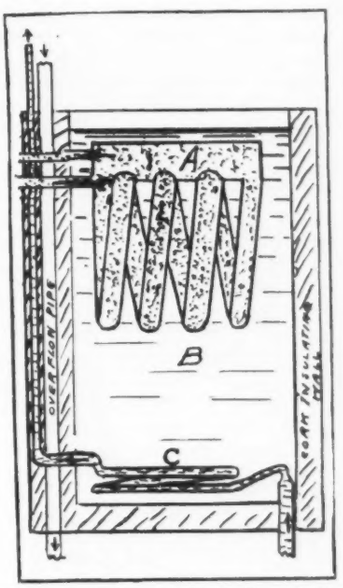

Fig. 2. Application of Cooling Coil to Drinking Water Fountain

Sulphur dioxide (SO_2) boils at + 14 deg. F., thus allowing for a low working pressure. It reacts upon iron and steel in the presence of moisture, so copper is largely used in coil construction. The gas is stable; that is, it may be changed from the liquid to the gaseous form repeatedly with very little deterioration. Its odor is acrid and unmistakable, making detection of leaks simple.

Methyl chloride (CH_3Cl) remains in the liquid state to —11 deg. F. It is noncorrosive and nonpoisonous. It has a head pressure of from 80 to 90 lbs. per square inch. It is nonexplosive in the gaseous state, unless mixed with from 85 to 90% air, when it can only be exploded with a detonator, spark, or white-hot wire. It is practically odorless and is considered stable in the sense referred to above.

Carbon Dioxide (CO_2) is a color-

less, odorless, nonpoisonous, but suffocating gas. Liquid carbon dioxide boils at —140 deg. F., hence requires very heavy construction to insure against explosion.

Of three well-known makes of unit refrigeration plants, "Frigidaire," "Kelvinator" and "Servel," the first two are operated on sulphur dioxide, while the latter uses methyl chloride. The "Arctic" machine accomplishes its cooling with liquid ammonia.

Marland Mills Installation

The Marland Mills, at Andover, Mass., were recently equipped with three compressors of the "Frigidaire" type of construction. These are used in connection with types No. 201, No. 400, and wall fountains Nos. 301 and 302 of the Eastern Fountain Co., Boston, Mass. of which twelve are in use.

The cooling coil A is placed near the top in the so-called "boiler" (Fig. 2) and is surrounded by a water bath B. The drinking water is led into a coil C at the bottom of the boiler, and thence to the bubbler head. This regular refrigerating coil, cools the surrounding water bath to about 40 deg. F. The cold water drops naturally to the bottom of the tank where it comes in contact with the coil in which the drinking water runs. The drinking water loses its heat to the bath water, which rises upon becoming warmed, is replaced by more cooled bath water, and is again cooled by the refrigeration coil. This circulation continues as long as the unit is in operation. It is claimed that four drinks per minute at a temperature of between 45 and 50 deg. are assured with this system.

A compressor of the ½ h.p. water-cooled type was installed on the first floor of No. 2 Mill. A boiler with fountain top is placed immediately adjacent to it and two other fountains connected to this boiler are placed in the basement and on the second floor. A second boiler with fountain top is set on the third floor, in direct connection with the compressor. Another fountain, the fifth operated on this compressor, is erected on the fourth floor.

In Mill No. 5 a compressor similar to the one in No. 2 Mill is operated on the first floor. A boiler of the above-described type is piped to this on the first floor, and from here two other fountains — a wall arrangement in the office on the first floor and a standard fountain on the second floor —are operated.

The installation in No. 4 Mill is quite similar to that in No. 2 Mill except that a single boiler is in operation beside the compressor on the first floor, and from this the cooled water runs to a wall fountain in the basement and to two standard fountains on the second and third floors.

The management, as well as the employes, are pleased with the performance of this system. It is estimated that the installation expense will be more than overbalanced by satisfaction, freedom from the messiness attendant with ice cooling, and saving in ice purchases.

Ring Roving in Worsted Drawing

Objections of Spinners to Method—Causes of Variations in Twist —Calculating Error—Rougher Thread

By Brompton

A RECENT reintroduction of ring rovers appears to have been more successful than was the attempt made some 30 years ago. The ring method of spinning is fairly well known in worsted spinning centers, and is better known in cotton spinning centers, but up to the present has met with little success in woolen yarn manufacture. What has been learned during the last few years regarding ring spinning — and this is by no means insignificant — is being utilized today by machine makers and spinners, and may account for the better success now attending the efforts of ring rover users.

Many times the question is raised, why, if the ring and traveler are satisfactorily used in worsted spinning, are they not more generally applied to worsted drawing—particularly to the roving operation. Most spinners have a ready answer for this—the thread is rougher, the correct drag is difficult to attain, and the twist varies as the bobbin builds up. Recent attempts, however, have been more successful than formerly, thanks in large part to a better knowledge of ring spinning. It has been shown that the rougher thread recovers its smoothness at the next stage of manufacture, the amount of drag can be governed by a specified weight of traveler, and the variation in twist imparts but a slight irregularity to the ultimate yarn. The author of this article does not recommend the ring method for the reducer. He goes to some length to explain the inherent lack of uniformity in twist and to show why it cannot be overcome.

The use of ring rovers is deprecated by many worsted spinners who affirm that the increased speed of ring over flyer spindles in the roving process will make a rougher thread. This is not denied, but the ring rover users qualify this statement by affirming that the thread may be a little rougher than that produced on flyer roving, but that at the next stage in manufacture it is impossible to identify the ring-made thread, when judging identical qualities processed in each system. It is necessary, however, to warn possessors of ring rovers that excessive speeds will, with nicked or worn travelers, give a very rough and beardy roving.

Certain difficulties have been encountered in accommodating the drag to the requirements of roving and bobbin. The machine makers now advise specific weights or size numbers of travelers to use for known dram weights of roving, though these may vary with different firms, owing to variations in quality of wool, twist imposed, speed of machines, atmospheric conditions, etc. The information tendered by the makers of ring rovers is good, and may well be taken for trial purposes, but should not be followed blindly without regard to other factors which influence tension requirements.

Twist Irregular

A vital point in ring roving is the difference in twist given to the thread at the beginning and finish of a set of bobbins (and varying slightly and progressively throughout the doffing) by the loss of a certain amount of twist in winding-on, due to the principle on which winding-on is effected. In this system of roving the thread is wound on the bobbin by reason of the lagging of the traveler behind the revolutions of the spindle, the traveler making fewer revolutions in unit time. Assuming S to equal the speed of the spindles, F to equal the delivery from the front rollers, and B to equal the diameter of the bobbin, one rule for calculating the speed of the traveler is:

$$S = \frac{F}{(B \times 3.1416)}$$

and every revolution lost by the traveler is one turn of twist less in the thread.

Winding-on in ring roving can only be accomplished by loss of twist in the thread, and as winding on is governed by the diameter of the bobbin — a constantly varying factor as it fills — the twist imposed in ring roving varies slightly from the first to the last layer on the bobbin, the last layer being harder twisted than the first layer. This may be, in certain cases, a serious defect, the twist irregularity making drafting in the next process a somewhat uncertain operation.

To state a case, suppose we have the following figures: Dram weight of roving, 2; spindle speed, 2,000 r. p.m.; twist per inch (calculated) 2.8, giving a front roller delivery of 714 in. per minute; dimensions of bobbins on spindles, 6 in. ×3 in.× 1¼ in.

Difference of 6%

When building on the first layer of the bobbin, each ring of roving is 1¼ in.× 3.1416 in length, equal to 3 13/14 in. In one minute, 714÷ 3 13/14 = 182 rings of roving wound on the bobbin, and this number of revolutions has been lost by the traveler, making the latter's speed 2000 — 182 = 1818, when the bobbin is empty. From this we have the effective turns per inch inserted in 714 in. of roving in one minute, which equals $\frac{1818}{714}$ turns per in., or 2.5[illegible] as against 2.8 calculated, a loss of [illegible]%.

To find the other extreme — the amount of twist imposed on the thread composing the last layer — a similar calculation is made, incorporating the full bobbin diameter in place of the empty diameter. In this case the length of one ring of yarn wound on the bobbin will be 3× 3.1416 = 9.42 in.

The number of rings of yarn wound on in one minute = 714 ÷ 9.42 = 76, making the speed of the traveler, when the bobbin is full, to be 2,000 — 76 = 1924. From this the effective turns of twist inserted in 714 in. of thread in one minute equals $\frac{1924}{714} = 2.69$, as against 2.8 calculated twist, a percentage loss of 4. In this example, there is an approximate difference in twist on one bobbin of 6% which is variable enough to cause trouble if every care is not taken to keep the twist requirements down to a minimum.

Drag Also Variable

This defect is also aggravated by the fact that when the twist in the thread is lowest — that is, when running on the first layer — the drag is greatest. It is well known among practical men that in ring spinning and roving the drag varies according to the distance between the traveler and the surface of the bobbin, and that the drag is greatest when the distance is furthest. In ring roving, there is a tendency for overseers and managers to meet this case by imposing more twist, whereas it would be better to keep the first layer as low in twist as possible, in order that subsequent layers will not be too hard; and also to run the first layer as hard in drag as possible (consistent with good work) so that other layers will not be too soft in drag.

It has been remarked by some spinners that they could not place the same length on ring bobbins as on flyer bobbins in roving. This has probably been due to their making the first layer, with its minimum of twist and its maximum distance from traveler, run soft and easy, resulting in later layers being still more easy, until the bobbin is full with little weight or length on it.

While some spinners remain still unconverted regarding ring roving, there are others who suggest not only rovers but also reducers of this type. Having pointed out the most serious defect of ring rovers, and offered figures in support thereof, we may say that with ring reducers the twist variation would be greater than in ring roving, and on this account we cannot endorse the extension of the ring system to reducer boxes.

There is also a slight twist varia-

(*Continued on page 127*)

Chances Still Favor Crop Above Average

Cotton Prices Probably Discount Crop of Less Than 15,248,000 Bales—Even Government Minimum Estimate of 14,800,000 Might Mean 5,000,000 Bale Carry-Over—Yarn Advance Working Toward Better Margins for Spinners—Finished Goods Are Improving Under Influence of Better Demand

ERRATIC movements in the price of raw cotton are the logical sequel of conflicting reports on the size of the crop. Vacillations in sentiment are customary at this time of the season when the unforecastable factors dominate the situation. The generally recognized lateness of the present crop makes the guesses more divergent than usual. The Government estimate of 15,248,000 bales as of Aug. 16 is assumed to be too large, as subsequent damage is reported to be severe. However, some of the damage since Aug. 16 was discounted in the last report. A few days of good weather could change sentiment materially.

Notwithstanding the criticisms of bi-weekly reports, it holds true that the monthly averages of raw cotton prices have shown more stability during the last three months than in any summer of the last six years. The manner in which quotations have held near the present level for so long a period is significant. Undoubtedly a crop of less than 15,248,000 bales is being discounted.

Deterioration of Crop Most Bullish Factor

The statistical position of raw cotton has become more bullish during the latter part of August. Instead of suffering from drought as at this time a year ago cotton has had to withstand excessive rain which favors the chances of insect damage more than the possibility of a bumper crop. It is almost universally agreed that the fruiting is late, which adds the danger of early frost; also that deterioration has taken place since Aug. 16; that the plants have gone largely to stalk; that there is much shedding, and that the bottom crop was disappointing.

Apparently the large carryover and enormous acreage have been discounted, so that whatever changes occur in price will depend on the new crop and on demand. The latter factor seems to favor high prices for a while. The low stocks of yarn due to curtailed spindle activity, the increase in orders for finished cotton goods, and the increase in jobbers' sales must be reflected to some extent in the raw price.

So much for the bullish factors. On the other side of the supply situation it must be remembered that the report of Aug. 16 this year is for a crop of 15,248,000 bales as compared with an estimate of 13,990,000 a year ago, when the final ginnings were 16,100,000 bales. Furthermore, even if the crop has to go through the season with conditions as bad as 1923-1924 (unusually poor years) the yield can still be 14,800,000. At this rate consumption of American cotton could amount to 15,000,000 bales, a liberal allowance, and yet the carryover at the end of the crop year would be 5,000,000 bales. It is of some significance that the low of the Government estimate was raised more than the probable yield was reduced.

Finally, a poor crop has been discounted by present quotations. Any factors which might insure a good yield could easily cause a reversal of sentiment.

The net conclusion is that with goods and yarns in greater demand and a deteriorating crop, the price of New York middling spot cotton will probably fluctuate not far from the 18c level for the near future. Later on when ginning figures are available for a few months, and when the present wave of speculation has subsided and the secondary top in business is at hand, it will be possible to make a more definite forecast.

Supply Situation Will Probably Continue Easy During Crop Year

As shown by the first graph, the estimate of the most probable yield is above that of any Aug. 16 in the last five years. The possible maximum yield was lowered 1,289,000 bales while the minimum was raised 375,000 bales. ***Even if conditions are as bad as in 1923 and 1924, at 14,800,000 bales the crop would be larger than in any recent year except 1925.*** The possibilities of a crop above average are still too good to become bullish on raw cotton prices except for the near future.

Further Improvement in Spinners' Margins to be Expected

It will be noted in our second graph that the price of yarn turned up in August. Is this upturn due entirely to the rise in raw cotton caused by a reduced crop estimate, or is the rise due to other factors? It would not seem that the increased price in raw coton was alone responsible, as the TEXTILE WORLD index of yarn prices began to move up even before the increased estimate of 15,631,000 bales was given out in the second week of August.

The lower half of the graph clearly shows the supply and demand factors which caused the upturn. In the first place spindle activity has been steadily curtailed. In the second place the orders for cotton goods increased in July. ***Thus both potential demand for yarn increased in the face of a more restricted supply. Finally the two curves as shown in Fig. 2 have crossed each other, so that it is apparent that demand bids fair to exceed the supply. The situation is shown by the disappearance of the shaded area in the graph.***

The answer to the above question gives rise to another: When will spindle activity increase? Before answering, it might be well to consider the factors involved. The increase in yarn prices

Textile World Analyst

An analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, who considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

SUMMARY—COTTON

1. The chances for a crop above the average are still too good to warrant a very bullish position. The minimum estimate of 14,800,000 bales, which discounts some of the deterioration after Aug. 16, should be adequate in view of the large carry-over.

2. Yarn prices increase with quickening demand for cloth, curtailed spindle activity, and higher raw quotations.

3. Cotton finished goods are now in an apparently healthy position with a fairly optimistic outlook for the near future.

4. The competitive position of raw cotton as a textile fiber is not so favorable as that of wool or silk. A large crop, though it might cause temporary instability, would be best in the long run for the trade.

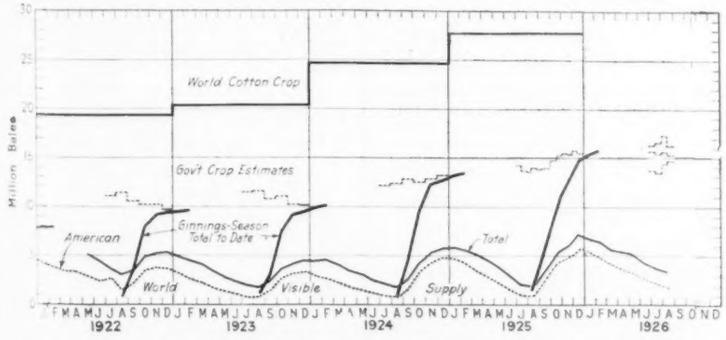
World Cotton Crop
Govt Crop Estimates
American
Ginnings-Season Total to Date
World
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Fig. 1. RAW COTTON SUPPLY—World Cotton Crop (estimated)—(Dept. of Agriculture). Government Crop Estimates—Solid lines for December indicate actual domestic crops (Dept. of Commerce). Ginnings—Cumulative for season to end of month shown. (Dept. of Commerce). World Visible Supply (American and total), as of the Saturday nearest the end of month (Commercial and Financial Chronicle).

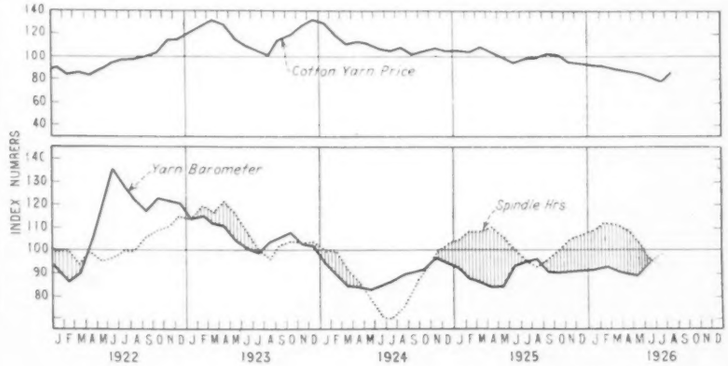
Cotton Yarn Price
Yarn Barometer
Spindle Hrs
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Fig. 2. COTTON YARN BAROMETER—Cotton Yarn Price—TEXTILE WORLD Index. Spindle Hours—Three-month moving average (Dept. of Commerce). Yarn Barometer—Based on orders for cotton cloth. Average of recent years = 100 for all indexes.

in August brought an increase in spinners' margins. Nevertheless, such margins are unsatisfactory and probably well below a replacement basis. Any increase in spindle activity will tend to keep the yarn margin at an unsatisfactory level, especially if raw cotton holds its gains.

Regardless of what should best be done, the possibility exists that spindle activity may increase in a month or two. As the Analyst has often pointed out, spindle activity varies closely with basic production. In July basic production reversed its trend and increased 1%. This is a small but significant gain. General business is moving up to a double top, and it would be reasonable to expect cotton spindles to participate in the upward move.

Moreover, the demand for cotton cloths is improving, and cloth prices are rising. Ultimately this demand must be felt by spinners and an increased output called for at a somewhat more favorable margin of profit.

Finished Goods in Healthier Position

The outlook for cotton goods has improved since a month ago. July data show: (1) A sharp increase in New York jobbers' sales, which was greater than usual for the season, (2) A correspondingly sharp increase in the orders for finished cotton goods; (3) Continued decline in billings of finished cotton goods; (4) High level of shipments coupled with restricted production causes stocks of finished goods to decline. (The trend of these stocks has been down for four successive months); (5) Sales by New York commission houses showed a decrease in July and held near the lowest level since three years ago; (6) Wholesale dry goods sales declined in July and fell below a year ago.

While the demand for cotton cloth cannot be called large, judging by sales in the past, in most instances it is increasing. Most textiles have gone through a period of liquidation and should be among the first to participate in any upswing in business. As most indexes attest the fact of such a trend, the outlook for the next few months is fairly bright for cotton cloth manufacturers.

Cotton is Relatively Expensive Textile Fiber

In conclusion, it might be advisable to consider the competitive position of cotton as a textile fiber. In spite of much comment on the cheapness of raw cotton, our studies lead us to believe that it is not quite so cheap relatively as either wool or silk. ***All three are fairly well placed in relation to the general price level, but cotton is still slightly higher than wool, and both are above silk.*** However, if the high cost of textile materials was responsible for the troubles in the cotton and wool industries in recent years, the present price levels are decidedly encouraging.

From the long time point of view, a crop somewhat above average would give cotton a competitive advantage, as low raw material costs would be reflected in yarn and goods with the resultant stimulation of demand.

Institute Membership Drive

Hope for 20,000,000 Spindles Before First Annual Meeting

CHARLOTTE, N. C.—Plans for an intensive membership campaign in the recently organized Cotton-Textile Institute, were formulated at a meeting here at the Southern Manufacturers Club last Saturday. W. J. Vereen, of Moultrie, Ga., former president of the American Cotton Manufacturers Association, and chairman of the Institute's membership committee, presided at the session of the membership committee.

A statement, following the meeting, said: "It was the judgment of those present at the meeting that gratifying progress has been made in enlisting the cooperation of a majority of American spindles in The Cotton-Textile Institute. It was furthermore the expression of those present at the conference that the Institute holds forth to the textile industry of the country the most attractive possibilities for the stabilization, not only of the cotton manufacturing industry, but also of the raw cotton market. A determined effort will be made to recover markets recently lost to cotton goods, to develop new markets, and to find new uses for cotton products. Mr. Vereen plans to issue regularly bulletins showing additional enrollments each week."

Completion of the membership campaign is expected to come before the first annual meeting of the Institute to be held in New York sometime between October 15 and 20. At this meeting permanent officers will be elected to succeed the temporary officers elected at the organization meeting July 21.

At the conference here Mr. Vereen, who emphasized the necessity of enlisting the 32,000,000 active spindles of America in the Institute, reviewed the critical condition now faced by the textile industry. It was pointed out that the organization of this Institute is regarded by Herbert Hoover as the most important step ever taken by the textile industry.

Mr. Vereen also reported that 18,514,414 spindles have already been enrolled in the Institute. Of the number enrolled, 10,295,880 spindles are operated in southern mills and 8,218,534 in nothern mills. It is planned to continue the membership drive so that at least 12,000,000 spindles in the South will be enrolled in a few weeks. Opinion was expressed at the conference that a total of 20,000,000 spindles should be enrolled before the annual meeting in New York.

Under the direction of J. M. Gamewell, of Lexington, and Hunter Marshall, Jr., of Charlotte, president and secretary respectively of the Cotton Manufacturers Association of North Carolina, a large percentage of mills in North Carolina have already been enrolled in the Institute.

Attending the conference here were Mr. Vereen, Stuart W. Cramer, of Charlotte, first vice president of the Institute, James P. Gossett, of Wilmington, president of the American Cotton Manufacturers Association; George P. Harris, of Atlanta, vice president of that association; B. E. Geer, of Greenville, S. C.; John A. Law, of Spartansburg, S. C.; B. B. Gossett, of Charlotte; J. C. Evins, of Spartanburg; J. M. Gamewell, of Lexington, Hunter Marshall, Jr., of Charlotte; and W. D. Adams, of Charlotte, secretary of the American Cotton Manufacturers Association.

Spinners Approve Institute

Believe Statistics and Research Will Aid Cotton Industry

CHARLOTTE, N. C. —Citing cotton as the only great industry failing to show profit over a number of years, the Southern Yarn Spinners' Association in the yarn trade bulletin issued Aug. 28, by the secretary, C. Singleton Green, exonerated over-production from blame and held lack of statistical knowledge by mill owners at fault.

The attention of spinners was called to statistics, showing that consumption for the year ending on the first of August was greater than ever before, the country absorbing carry-over stocks from 1924 and 1925. No stocks of cotton goods are on hand at the present time, the bulletin says.

In seeking the underlying reason for the depression, the bulletin says, the spinners' association has found that failure in mill managements to comprehend volume of production, consumption and stocks has materially handicapped mill operation.

As a result, it is held, in many instances stocks have accumulated far in excess of demand for various fabrics and distress sales have been necessary. This, the bulletin sets forth, has not only caused loss on the particular style, but has tended to create a general depression in the market.

The Cotton-Textile Institute is offered as a source of statistics on production and a medium of close cooperation between manufacturers, the development of new fields for the use of cotton and of research and experimental development.

Enclosed with the bulletin is a copy of "Articles of Association" of the Institute.

Four Fall River Mills Support Institute

FALL RIVER, MASS.—So far as can be learned the American Printing Co., King Philip mills, Pilgrim mills and the Luther Mfg. Co., are the only local mills that have agreed as yet to become members of The Cotton-Textile Institute that is being formed as the result of the recent move of prominent textile men of the country to attempt a betterment of textile conditions throughout the country.

It has been estimated that there are about 24,000,000 cotton cloth mill spindles in the country and it is understood that about 19,000,000 have already signed in favor of the institute. The South is solid for the institute as is most of the North. This city has about 3,500,000 spindles and is thus the only large textile center that has not come in upon the agreement.

United Textile Workers Issue Charter to Passaic Strikers

The United Textile Workers of America issued a charter on Aug. 30 to the mill strikers in Passic according to Henry T. Hunt, New York attorney, who is a member of the Lauck committee.

Mr. Hunt said that granting of the charter followed the delivery to the United Textile Workers organization of 3,647 signed applications for membership. About 4,000 more applications, he added, were in the process of certification.

TEXTILE BALANCE OF TRADE

EXPORTS

	Twelve Months Ended			
Manufactures of:	**June 1926**	**June 1925**	**June 1926**	**June 1925**
Cotton	$9,264,296	$9,330,917	$120,578,127	$127,592,681
Wool	280,338	259,450	4,446,441	5,006,905
Silk	1,441,788	2,317,143	18,409,941	16,805,201
Rayon	604,846	1,022,978	7,515,436	9,404,124
Jute, flax, hemp, etc.	1,085,535	979,318	12,890,029	13,575,902
Total Exports	$12,676,803	$13,909,806	$163,839,974	$172,384,813

IMPORTS

Manufactures of:				
Cotton	$4,790,634	$5,250,188	$63,168,179	$79,181,415
Wool	4,995,543	4,957,839	55,863,405	53,033,269
Silk	2,986,000	2,539,931	38,536,611	36,773,067
Rayon	1,028,288	612,562	15,476,962	8,330,642
Jute, flax, hemp, etc.	11,949,927	10,926,469	149,906,773	138,197,681
Total Imports	$25,750,392	$24,286,989	$322,951,930	$315,516,074
Excess of Imports over Exports	$13,073,589	$10,377,183	$159,111,956	$143,131,261

Editors
Charles H. Clark Vernon E. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
In the Conservation and Protection
of Domestic Industries

The Question of Style

IN both the cotton and wool manufacturing industries it is well known that conditions have been so unsatisfactory as to need remedial measures. As a consequence it is not surprising that in both divisions cooperative effort to solve many of the pressing problems peculiar to both is being made. While a certain amount of depression is also to be noted in the silk section of the industry affairs have not reached the unfortunate position that obtains in the other two classes of merchandise and no call is heard for the drastic measures that are regarded as necessary in cotton and wool.

It is not intended to probe into all the underlying reasons for the more satisfactory conditions in silk manufacture but we wish to raise the question whether the subject of styling has not received much more attention by silk manufacturers and distributors than by those engaged in the production and distribution of cotton and wool goods to the decided advantage of the former.

It is a day of style. The ultimate consumer thinks much more of style than of price. No matter how cheap a fabric or a garment may be if it is not in style it is passed by and possibly something much less meritorious from the standpoint of durability or of conservative excellence will be accepted with avidity. The retailer is to-day selling style. The large department stores in this and other cities are spending large sums for style advisers in their various departments and in training their help to talk understandingly on this matter. The seller who can show something which has style for its talking point is likely to get a most favorable reception with the retailer, while the individual who persists in sticking to old-established staple lines is being given scanty consideration.

The silk manufacturer has for the most part realized this trend of affairs and has tried to be abreast of the times by spending time and money to develop new ideas in fabrics which will cause interest on the part of the ultimate consumer. He has sent stylers abroad to art centers, there to accumulate the newest things in fabric styles and colorings. While intimate contact with the trade at home has supplemented this first hand knowledge and made it possible to adapt it to domestic conditions and trends.

Can as much be said of the rank and file of cotton and wool manufacturers? Of course, there are always exceptions to every rule, and there are undoubtedly those who are outstanding examples of efficiency and success in the matter of styling in the two branches of the industry mentioned. But far too often the matter of styling is of very secondary consideration and regarded as a necessary evil, to be done as cheaply and economically as possible. Too infrequently is it regarded as an art which should be studied laboriously and developed through long years of experience and application.

Very frequently the expression is heard that a specific line of cottons or wool goods shows very little difference from those of the past season. In fact similarity can often be traced through a number of years with so little change as to form the subject of comment by the buyer. The manufacturer who has made a conspicuous success in either of these divisions almost universally has a reputation for well-styled lines. Of couse other qualifications are necessary for success but to-day no leader in the market can be selected whose lines have not received careful study from artistic, capable, as well as practical stylers who have an eye for the beautiful, for color harmony and for that which can be sold profitably.

If cotton and wool manufacturers are to emerge from their present position of depression one of the most effective measures to bring about this result is a development of increased merit in the styling of merchandise. Such a development is calculated to increase the profit to the mill and to make the process of distribution more scientific and efficient.

THE TEXTILE TREND

Cotton Markets: Steadiness to prices begun after last Government report has continued, with business gaining. Volume expected to increase after Labor Day. Ordering of yarns at closer to spinners' prices than for a long time is the rule. Difficulty in getting prompt delivery.

Wool Markets: The later openers of men's wear lines are receiving fair business. New spring trade has gone chiefly to a limited number of selling agents. Three and four-ply cloths gain. Women's wear picking up, with bolivias now sold up for some time ahead. Spurt in worsted knitting yarn sales; duplicate orders on fall goods help weaving yarns.

Knit Goods: Distinct improvement in current demand for fall hosiery reported. Buyers asking prompt delivery. Little development is noted for spring goods. Underwear buyers expected to show more activity on spring goods after the holiday.

Silk Markets: Continued strong demand for satins will evidently leave stocks at the vanishing point when season ends. Cantons according to some houses were quieter. Georgettes swinging back into popularity. Raw silk strong.

* * *

Do Clothiers Want Earlier Piece Goods Openings?

EARLY last June the Clothing Manufacturers' Research Board, after conference with a committee from the National Association of Retail Clothiers and Furnishers, drew up a schedule of suggested dates for the seasonal openings of woolen-and worsted piece goods. For the spring season it was asked that woolen suitings and staple worsteds be opened on July 15, and that fancy worsteds be opened on Aug. 1.

Although it was agreed that the suggestion was made too late to put into full effect for the spring, 1927, opening, nevertheless the developments during the course of this opening which has been taking place during the last eight weeks, appear strikingly significant to mill selling agents.

Taking the American Woolen Co's. opening dates as representing the season's start, we find that staple worsteds opened on July 7 and woolens and fancy worsteds on Aug. 11. Here is a straddle, the first showing being earlier and the second later than the suggested schedule.

Taking the market as a whole, clothiers have shown no indication of acting in accordance with the suggested opening dates. The feeling is expressed by men's wear agents who withheld their showings until the latter part of August, that even then they had opened too soon, and the belief is generally prevalent among a large number of the independents that the later the offering the greater is the advantage to the seller because the necessity of buying is becoming more and more pressing upon the clothier as the weeks pass.

If clothiers believe it to be to their advantage to obtain early openings, the straight line method to gain that end is to support the openings promptly, placing as much initial business as possible. Continual delaying and the playing of one line against another are the tricks of the trade which agents can meet only with late openings. The rank and file of clothiers must either cooperate with or else discredit their spokesmen who ask earlier openings from men's wear mills.

* * *

A Big Merchant

WITH the passing of Elijah P. Smith, former head of one of the largest cotton goods commission houses in the country, there goes from the selling market a figure that stood for much that has built up the cotton manufacturing industry in this country and made of it a business that commands respect and even wonder. Mr. Smith was of the type known as the old-time merchant. This does not mean he was not up to date in his methods, for he conducted one of the largest businesses in textiles in a way that commanded the respect and admiration of all who knew of its details.

He was a merchant in every sense of the word and possessed what too few executives connected with the commission trade are able to develop, namely, a correct mental balance between the exactions of the buyer and the responsibilities of the selling house to the mills it represents. It has often been said of Mr. Smith that he was able to get a better price for his mill's goods than a great many of those who occupied similar positions of responsibility but that at the same time he was able to consummate large deals in a manner that convinced the buyer of his knowledge of the

situation and of his warrant for asking the prices he quoted.

Mr. Smith was one of the most prominent factors in the development of the southern cotton mill industry. Through his financial connections he rendered assistance to those who were prominent in the early struggle for existence in the South and many manufacturers can thank him for placing their business on a firm foundation that has led to substantial success. He took a preeminent part in developing export trade on staple cotton goods and was responsible for many of the largest contracts to foreign countries, particularly China, when business with that market was in its heyday of activity. Although retiring from active business in 1916, his advice and counsel were always available almost to the last. He will be missed as a type of the older generation who were the mainstays of the cotton goods distributing trade.

* * *

Information of Public Interest

THE publicity campaign of The Association of Cotton Textile Merchants of New York, regarded with skepticism by those who saw in it a play for "free advertising," has already developed information of interest not only to the man-in-the-street but to those actively engaged in textile manufacture. Detailed statistics regarding the growth of the industry are available in formidable tables compiled by the Bureau of the Census, but the interpretation of these figures is not always readily available to the average individual who is "gun-shy" of data.

Consequently it is interesting to note that the capital invested in cotton manufacturing has increased approximately 500% during the last quarter century. Of still greater interest is the fact that this industry now employs about a half a million people. In other words, its future is of interest directly to that large slice of our population, to say nothing of the number of individuals who are dependent upon wage-earners in cotton mills, or who, as shareholders, are interested in the prosperity of the industry.

Releasing accurate and easily understandable facts about this important branch of our industrial life is a function which well warrants the attention and expenditure of an organization comprised of distributors of cotton goods.

Wool Council Appoints Permanent Organization Committee

PHILADELPHIA.—The Wool Council of America announces the following Committee on Permanent Organization: from the National Association of Wool Manufacturers, Edward Farnham Greene, chairman, of Pacific Mills, and Lockwood, Greene & Co.; from American Association of Woolen & Worsted Manufacturers, Geo. B. Sanford, of Sanford & Russell, New York; from Boston Wool Trade Association, Abraham Koshland, of J. Koshland & Co., Boston; from National Association of Worsted & Woolen Spinners, N. B. Kneass Brooks, of N. B. Kneass Brooks, Boston; from Philadelphia Wool & Textile Association, Alban Eavenson, of Eavenson & Levering Co., Camden, N. J. This committee will meet in Boston, Wednesday, Sept. 8, to formulate a constitution and by-laws and also to discuss a subject which will pertain to the question of a permanent organization.

To Confer on Cleaning and Dyeing Problems

WASHINGTON, D. C.—Fabric maintenance problems tabulated by the National Association of Cleaners & Dyers affect 30 trade associations in the textile field and these are being invited to attend the conference scheduled by Sept. 20 in Washington under the auspices of the U. S. Chamber of Commerce. At that time the various associations will be requested by the maintenance group to appoint permanent committees to function in cooperation with the dyers and cleaners' organization in tracing the identity of merchandise which has proved defective when subjected to proper cleaning processes. At the forthcoming conference will be presented a new method for cleaning furs and the report of an investigation of the weighting of silk made at the Bureau of Standards by the associate of the National Association of Dyers & Cleaners.

WATERFORD, N. Y. The plant of the Ford Mfg. Co. will be shut down from Aug. 27 to Sept. 7 for repairs.

Knitters Confer With Retailers

Talk Over Problems and Abuses with Representatives of Clothiers and Furnishers in Chicago

AT a meeting of the sub-committee for the underwear division of the Apparel Industry Committee, held at the office of the National Association of Retail Clothiers and Furnishers, Chicago, on Tuesday, there were present representing clothiers: Leon Baer, of Baer Brothers & Prodie, Chicago; O. L. Anderson, of Washington Shirt Co., Chicago, and Charles E. Wry, secretary of the association, Chicago. Representing underwear manufacturers were the following: R. S. Cooper, Cooper Underwear Co.; C. F. Stickler, Superior Underwear Co.; G. C. Good, Globe Knitting Works, and Roy H. Cheney of the Associated Knit Underwear Manufacturers of America. Mr. Wry acted as temporary chairman, and Mr. Cooper was elected to serve as chairman of the sub-committee for the underwear division.

Retailers asked consideration of subcommittee to suggestions offered by members of their association. Considered first was the request from retailers that underwear manufacturers, adopting new standardized underwear measurements, should label boxes to conform. Discussion relative to enforcement of penalties for misuse of the standard label followed. Committee approved the idea that this policing should be in the hands of a joint committee, to include retailers. Announcement will be made shortly from the Clothiers' Association of representatives on that committee. The committee will entertain complaints of misuse of the standard label and will be accorded the right to revoke its use when misuse is proven.

The next topic considered was standardization of box sales. The retailers complained that it was a source of annoyance and expense that manufacturers shipped their products in various sized boxes. Mr. Cooper explained that the underwear committee was at work on plans for standardizing boxes for use in the underwear industry. It was recommended by the sub-committee that B. L. Davis, traffic manager for the retailers' association, should serve as an additional member of the standardization committee on this topic.

The next suggestion advanced by retailers was that labels indicating size should be placed on the garment. It was finally agreed that a uniform type of designation should be attached to union suits, that the trunk measurements should be used and emphasized, and that the size designation should be placed between the first and second button or stay.

It was agreed that style simplification and reduction must originate with the retailer. It was decided to study this matter thoroughly. Mr. Cooper, chairman of the sub-committee, was instructed to take the matter up with the Division of Simplified Practices of the Department of Commerce.

An interesting exchange of facts regarding trade abuses, involving the practice of exclusive agencies, failure of manufacturers to keep a stock for duplicate orders, and similar troubles, followed. It was agreed by the committee that the bulk of these troubles originated through the failure of the retailer and salesmen to note definitely on the face of the order all the agreements made concerning orders. It was recommended by the committee that all agreements between retailers and salesmen and all promises made by salesmen to retailers should be written on the order.

The next topic had to do with the advertising of retail prices by manufacturers. It was unanimously recommended by the committee that where retail prices are advertised by the manufacturer, the latter should give due regard to present cost of doing retail business, and the price advertised should be such as to insure a reasonable profit to the retailer. Detailed report from the committee will be made at the Industry Day session at the time of the National Association's convention at Philadelphia on Sept. 22.

TEXTILE CALENDAR

American Chemical Society, Golden Jubilee Meeting, Philadelphia, Pa., Sept. 6-11, 1926.

Textile Operating Executives of Georgia, Fall Meeting, Henry Grady Hotel, Atlanta, Ga., Sept. 14, 1926.

Boston Wool Trade Association, Tenth Annual Outing, Vesper County Club, Lowell, Mass., Sept. 21, 1926.

National Association of Worsted and Woolen Spinners, Annual Field Day, Manufacturers Country Club, Philadelphia, Pa., Sept. 23, 1926.

Second Southern Exposition, Grand Central Palace, New York City, Sept. 26-Oct. 6, 1926.

National Association of Cotton Manufacturers, Fall Convention, Copley-Plaza Hotel, Boston, Mass., Oct. 13-14, 1926.

Texas Textile Association, Annual Convention, Hotel Westbrook, Fort Worth, Texas, Oct. 15-16, 1926.

Associated Industries of Massachusetts, Annual Meeting, Copley Plaza and Westminster Hotels, Boston, Mass., Oct. 20-21, 1926.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Nov. 1-6, 1926.

Southern Textile Association, Fall Convention, Greenville, S. C., Nov. 5, 1926.

National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York, Dec. 6-11, 1926.

Made Superintendent of Algonquin

Joseph H. Hindle, former superintendent of the American Printing Co., printing division, has been made superintendent of the Algonquin Printing Co., Fall River, Mass., to succeed William Halloran, who has resigned on account of ill health.

WESTFIELD, MASS. Textile and allied interests will pay the following taxes this year: Foster Machine Co., $6801.09; U. S. Whip Co., $6666.55; W. Warren Thread Works, $4504.30; Textile Mfg. Co., $2320.04; Cleveland, Cargill & Co., $1344.78; Standard Whip Co., $840.10; Atwater Knitting Co., $806, and the Rheabat Corp., $744.

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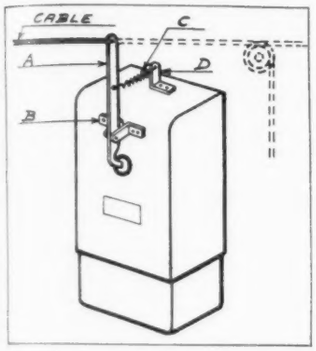
Remote Compensator

Controlled by Flexible Cable and Lever

By J. Limbrunner

It is sometimes desirable to have the motor as well as the starter outside of the rooms in which inflammable material is used. Whenever a new installation is made, of course the easiest and most efficient method is to install a contactor panel near the motor and the start and stop push buttons in the room where the machines are located. Where an old compensating starter, however, is available, it can be used as well, as it can be at least stopped from a remote point if it is provided with a lever and flexible cable as shown in the illustration.



Compensator Arranged for Remote Control

A lever A is held by a flat bar bracket B which is fastened to the casing of the compensator. A spring C secured to the lever at one end and to arm D at the other end serves to pull the lower point of the lever away from the push button, which is a part of the starter. A flexible cable fixed to the upper end of the lever is then run to the room from which the motor is to be stopped. A pull on this cable will cause the lower end of the lever to push the stop button on the compensator.

By using suitable pulleys or sheaves, this cable can be guided to the lower or upper floor so that the motor can really be stopped from any distant point. It should be understood that the operator will have to leave his machine to start the motor as this type of starter cannot be put in starting position from a remote point.

Textile Power Plant Costs

Interesting Report from Phoenix Hosiery Co. and National Knitting Co., Milwaukee, Wis.

THE following interesting report was presented at the Annual Convention of the National Association of Stationary Engineers at St. Paul by the Power Plant Cost Committee, consisting of Egbert Douglas, chairman, Charles F. Bindrich, and Charles H. Bromley:

The Phoenix Hosiery Co. in Milwaukee operates two large mills containing steam-power plants and two mills in which purchased electrical power is used. From the steam-power plants the following figures for one year's operation are available in Table I.

Six days per week 60,000 gals. of soft water is heated by exhaust steam from an average temperature of 50 to 170 deg. for dyehouse uses. Approximately 90% of the total steam made is used for purposes other than power production. The actual cost of electrical energy produced is computed at no more than 3/4c per kw. hr., including all charges.

In one of these plants for each kilowatt-hour of electricity required throughout the factory 190 lbs. of steam has to be generated to take care of the power plus the other uses, and in the other plant for each kilowatt-hour of electricity required there is generated 314 lbs. of steam.

The company has two factories in other buildings where steam is not required for manufacturing purposes, and the buildings are rented with heat furnished by the landlord. In these a large amount of power is used which is purchased from the central station at primary or transmission voltage, so that the lowest available rates are obtained.

In building No. 8 there was used in twelve months 809,252 kw. hrs. with a demand of 240 kw. and an average power factor of 74%. The power cost for the period covered was $14,089.08, giving an average rate of 1.73c per kw. hr. for the purchased current. The labor incidental in the use of this power amounted to $2,000, bringing the total cost of the power as used to $16,089.08, equivalent to 1.98c per kw. hr. The annual load factor is 38.4%.

In building No. 9 power is purchased under similar conditions. Here there was used in twelve months 725,600 kw. hrs., with a peak demand of 320 kw. and an annual load factor of 26%. The power factor of this load is maintained with corrective condensers at 94%, thus making the average rate lower than it would have beeen without them. In this plant the annual cost for power was $13,844.94, or 1.91c per kw. hr. With the necessary labor item of $1,820, the total cost appears as $15,664.94, or 2.16c per kilowatt-hour.

It is of interest to point out that in the two plants where large quantities of steam have to be made for manufacturing purposes, the electrical power is produced for about 3/4c per kw. hr., which is little more than one-third of what the purchased power is costing at the lowest available rates in the two plants buying power.

From the National Knitting Co. of the same city the operating figures by months for the complete year of 1924 are available in Table II. This plant has a mixture of both alternating- and direct-current motors. Energy for the alternating-current motors is purchased at present because alternating generating equipment has not been installed. The energy for all the direct-current motors is generated by a pair of belted generators driven from a twin Corliss engine which has seen many years of service. While the plant is not of a design one would put in at this time, as it was installed more than 20 years ago, it has been maintained in excellent condition and is producing its service at a satisfactory profit.

By applying the prevailing rates for power and steam to the quantities this plant turns out and after allowing for other business-like charges, the plant shows a net profit of $23,000 in round figures per year. This is equivalent to about 25% on the value of the plant as the company values it with its other property.

During the heating season of about eight months, exhaust steam is used to heat 2,477,244 cu. ft. of space. If both the steam and electric services of this plant had been purchased at the prevailing rates, the costs would have been 47% more than the operating and maintenance expenses as calculated for the present power plant.

TABLE I—OPERATING DATA FROM STEAM PLANTS OF PHOENIX HOSIERY CO.

	Building 4	Building 6
Fuel	$35,922.27	$46,737.33
Operating labor	13,913.97	13,321.36
Repairs and maintenance	2,167.54	1,231.28
Oils and miscellaneous supplies	1,103.75	933.19
Water	2,120.52	2,377.50
Total operating expenses	$55,228.05	$64,600.66
Coal burned, tons	7,735	9,700
Steam produced, lbs.	141,687,000	182,360,000
Steam per pound of coal, lbs.	9.1	9.4
Kilowatt-hours generated	740,460	580,650
Pounds of coal per kw. hr.	21	33.5
Steam made per kilowatt-hour, lbs.	190	314
Total space heated, cu.ft.	.....	7,854,000
Average electrical load factor, per cent	.....	42

PAWTUCKET, R. I. The Colonial Processing Co., capitalized at $300,000, is now operating the former plant of the John West Thread Co. at Prospect St., Pawtucket. Joseph Schindler is president of the new company; John R. Ross, treasurer; Edward B. Hebden, superintendent; Edward B. Hebden and J. R. W. Smith, buyers. The firm operates a raw stock dyehouse.

TABLE II—POWER PLANT REPORT FOR 1924, NATIONAL KNITTING CO.

Month	Generated Current, Kw.-Hr.	Purchased Current, Kw.-Hr.	Total Current Kw.-Hr.	Generated Steam, Lb.	Coal Used Lb.	Cost of Coal	Operating Expense: Salaries	Supplies	Repairs and Insurance	Water	Dep. Mach. and Equipment	Overhead on Bldgs.	Factory Overhead	Total Expense	Commercial Valuation of Services: Purchased Energy	Electric Energy	Steam at Low-Pressure Rates	One-half of Factory O. H.	Labor	Total
January	53,590	20,740	74,330	8,847,290	1,020,000	$3,210.69	$895.95	$97.33		$26.32	$615.43	$49.42	$586.20	$5,481.24	$670.88	$1,522.31	$5,750.73	$293.10	$290.00	$7,856.14
February	48,570	21,610	70,182	6,814,190	903,500	2,076.94	966.49	59.69	Repairs	29.75	615.43	49.42	500.53	4,298.16	759.11	1,417.66	4,429.22	250.26	290.00	6,387.14
March	41,280	17,329	58,509	5,969,240	686,000	2,142.74	1,298.01	58.34	for	23.52	615.43	49.42	474.00	4,570.96	682.40	1,179.70	3,874.00	237.00	355.00	5,645.70
April	48,269	9,244	57,513	5,644,700	665,000	1,523.45	959.17	8.21	Year	36.76	725.50	57.00	606.78	3,916.67	478.68	1,371.63	3,668.60	303.39	290.00	5,633.62
May	51,640	6,222	57,862	5,633,980	685,200	1,717.36	1,193.62	48.14	$706.10	36.76	660.40	45.60	440.69	4,147.07	243.00	1,464.60	3,675.10	220.34	350.00	5,710.04
June	53,430	6,962	60,392	4,809,725	567,500	1,276.76	963.39	43.46	Insurance	36.55	660.40	45.60	438.81	3,471.82	259.39	1,513.82	3,126.50	219.40	290.00	5,149.72
July	40,790	7,878	48,668	3,329,370	512,338	1,355.99	969.22	53.03	$385.80	37.44	825.50	57.00	570.82	3,869.00	284.18	1,164.21	2,163.85	285.41	290.00	3,903.47
August	42,790	7,930	50,690	4,226,675	556,796	1,108.64	998.16	59.29		38.09	660.40	45.60	414.94	3,320.98	282.63	1,221.21	2,747.53	217.47	290.00	4,476.21
September	39,790	5,212	45,002	3,547,135	543,000	1,325.66	962.79	48.30		23.58	825.50	45.60	420.46	3,486.79	206.71	1,135.01	2,308.35	210.23	290.00	3,943.59
October	38,680	5,421	44,191	3,835,850	667,750	1,233.68	1,008.19	57.29		39.82	660.40	57.00	468.20	3,684.68	211.04	1,902.38	2,506.40	234.10	290.00	4,122.88
November	48,660	7,008	55,668	4,648,100	651,750	1,620.64	819.52	49.39		40.75	660.40	45.60	389.00	3,625.40	262.35	1,391.65	2,998.20	194.50	290.00	4,871.35
December	51,960	4,723	56,683	5,930,110	814,750	1,839.19	878.58	49.88		40.89	660.40	45.60	796.00	4,310.64	203.07	1,473.40	3,854.50	398.00	290.00	5,915.90
Total	559,449	120,251	679,691	63,227,365	8,273,584	$20,431.04	$11,823.00	$623.26	$1,091.90	$408.08	$8,185.19	$592.86	$6,106.43	$49,275.31	$4,573.44	$15,947.58	*$41,099.98	$3,063.20	$3,605.00	$63,615.76

* Steam corrected for high-pressure used, 8,534.07; total value of steam, $49,634.05.

THE PERSONAL PAGE

Andrew G. Pierce has been elected president of the Grinnell Mfg. Corp., New Bedford, Mass., as successor to Otis N. Pierce, who resigned some weeks ago, since which time his successor had held the office.

John W. Mapel has been elected president of the Goodyear Tire & Rubber Co., of California, and the Goodyear Textile Mills Co., Los Angeles, to succeed E. G. Wilmer, who resigned a few months ago in order to take an active part in the management of Dodge Bros. Motor Car Co.

J. Howell Cummings, president of the John B. Stetson Co., Philadelphia, left that city on Aug. 27 for a trip to South America, where he will make a survey of business conditions with a view to increasing the company's business in Brazil, Uruguay and the Argentine Republic.

Sidney Worms, president of the Franklin Knitting Mills, New York, has returned from a two-months' trip abroad. While there Mr. Worms negotiated for a new plant in England, which will make knitted neckwear, to be distributed in England and on the Continent by his own organization.

First meeting of the newly appointed Committee on Taxation of the Philadelphia Chamber of Commerce was held Sept. 1, among those attending were: John Fisler, head of Yewdall & Jones Co., and Conyers Reed of Wm. F. Read & Sons Co., of Philadelphia.

A. L. Draper, of W. H. Draper & Sons., Inc., Troy, N. Y., has been selected as a delegate to the Republican State convention from Rensselaer county.

George M. Bassett, president and treasurer of Johnson & Bassett, Inc., manufacturers of wool spinning machinery, Worcester, Mass., was host to its employes at the annual clambake which was held at the Quinsigamond Boat Club in that city on Aug. 28.

A. F. Osterloh has resigned as vice-president and general manager of the Goodyear Tire & Rubber Co., of California, and the Goodyear Textile Mills Co., Los Angeles, and will take a short vacation before returning to business in Southern California. He will be succeeded as vice-president by H. E. Blythe, who will also continue as general superintendent.

I. R. A. Curry has purchased the half interest of George H. Storrs in the Octonek Knitting Co., Seattle, Wash. Mr. Curry was formerly city sales manager of the Crescent Mfg. Co., Seattle.

Umberto D. Povano, secretary of A. P. Villa & Bros., Inc., New York, has tendered his resignation, effective Sept. 1. He will sail on Sept. 4 for an extended vacation in Europe.

Frank Dorfman and Miss Jeanette Glick, daughter of Harris Glick, Worcester, Mass., shoddy manufacturer, were married at the home of the bride's parents on Aug. 29.

E. L. Whitaker, agent of the American Finishing Co., with plant at Memphis, Tenn., has been elected vice-president and a member of the board of that company. He will continue to make his headquarters at 320 Broadway, New York.

Will Zvirin, executive director of the Eastern District Knitted Outerwear Ass'n, has resigned and Reuben Grisman, of Grisman Co., New York, has succeeded him.

E. F. Buffington has been appointed supervisor of the New Bedford Board of Arbitration, an organization to settle disputes arising between buyer and seller on the types of cotton sold to the mills in New Bedford, Mass.

Victor E. Hillman and Earle D. Clark, metallurgist and assistant metallurgist, respectively, for the Crompton & Knowles Loom Works, Worcester, Mass., have prepared a paper on "Cyanide Brittleness" which will be read at the eighth annual convention of the American Society for Steel Treating and the National Steel and Machine Tool Exposition to be held in Chicago, Sept. 20 to 24.

Warner A. Mueller, junior marketing specialist of the Department of Agriculture, Washington, and connected with wool standardization work, has resigned that position and will take special courses in a college at Davenport, Ia.

Grant Van Valin, sales manager of the Milwaukee (Wis.) Hosiery Co., for several years, has tendered his resignation, effective Sept. 15. He plans to move to southern California where he will engage in another line of business.

Robert J. Cameron, of the Springfield, Mass., branch of the William Carter Co., Needham Heights, Mass., and Mrs. Cameron, who were married on June 9, have returned from their wedding trip to Scotland, the former home of the groom.

Frank Baldwin, formerly for many years associated with Warner J. Steel, Bristol, Pa., is returning on Sept. 1 and will assume the position of superintendent of Mr. Steel's plant, the Thornbury Worsted Mills. Mr. Baldwin for some years had charge of operations at the plant of the Pocasset Worsted Co., Inc., Thornton, R. I.

M. C. Mullen has taken the position as superintendent of the Dedham Mills, E. Dedham, Mass. Mr. Mullen was formerly superintendent of the Plymouth (Mass.) Yarn Co.

Walter Ayers has taken the position as superintendent of the Leominster (Mass.) Worsted Co. succeeding Charles O. Hirst, who held this position for a number of years. Mr. Ayers formerly held the position as designer for this company.

J. W. Strout, formerly with the Loray Division of the Manville Jenckes Co., Gastonia, N. C., is now superintendent of the High Shoals (N. C.) Mills of that company. Due to a typographical error, Mr. Strout's name was incorrectly spelled Stuart, in a recent issue.

A. A. Stenholm, superintendent of the Nelson Knitting Co., Rockford, Ill., has resigned after 43 years of service with that company, and will make his home in Florida.

J. C. Ballard, superintendent of the Rhyne-Houser Mfg. Co., Cherryville, N. C., has resigned that position, effective Sept. 1.

H. W. Kiser, superintendent of the Martel Mills, Batesburg, S. C., has been transferred to a similar position in the Mercury Mills, formerly the Mecklenburg Mills, Charlotte, N. C.

Ernest Whitley, former superintendent of the Rivulet Spinning Co., Inc., a branch of the Uxbridge Worsted Co., Inc., North Uxbridge, Mass., has accepted a position as superintendent of the M-F Worsted Co., Inc., Providence, R. I.

Walter Noble Cooper, assistant superintendent of the Kinney Worsted Yarn Co., Pittsfield, Mass., and Miss Frieda Wilson Cornell of that city, were married at the home of the bride on Aug. 21.

A. W. Greer, Jr., has resigned as designer for the Griffin (Ga.) Mfg. Co. to take a position in the Autauga Cotton Mills, Prattville, Ala.

Edward Mitchell has been appointed superintendent of the welfare department of the cotton goods bleachery of Cluett, Peabody & Co., Waterford, N. Y.

Warren H. Pearman, general overseer of spinning, spooling and twisting at the Princeton plant of the James White Cotton Mills, Athens, Ga., for the last three years, has been placed in charge of the card room also.

Albert H. King, overseer of dyeing for the Clover Worsted Co., Franklin, Mass., has resigned his position with that company.

T. R. Morton, formerly of Mexia, Tex., is now general overseer of twisting, warping and spooling with the Goodyear Clearwater Mills., Cedartown, Ga.

Stanley J. Pratt has taken the position as overseer of finishing for the Brampton Woolen Co., Sunapee, N. H. Mr. Pratt comes from Belmont, Mass.

J. G. Garrett, formerly overseer of weaving at Drayton Mills, Spartanburg, S. C., is now holding a similar position with Judson Mills, Greenville, S. C., where he succeeded W. W. Rogers who has taken Mr. Garrett's place as overseer of weaving at Drayton Mills.

A. W. Robinson has been promoted to the position of night overseer of carding and spinning at the Belmont (N. C.) Fabric Co.

Robert G. Blake, overseer of weaving for the Warrenton Woolen Co., Torrington, Conn., has resigned his position with that company.

J. H. Franks, formerly night overseer of weaving for the Darlington (S. C.) Mfg. Co., is now night overseer of weaving at Dunean Mills, Greenville, S. C. He is a brother of E. A. Franks, superintendent of Duncan Mills.

J. L. Brannon has taken a position as overseer of carding in Mill No. 3 of the Chadwick-Hoskins Co., Charlotte, N. C.

Peter Eberhart has taken the position as overseer of finishing for the Braeburn Woolen Co., Glenham, N. Y.

Hedwig Stuzenegger, warper forewoman in the Schwarzenbach-Huber & Co., mill at Altoona, Pa., who has severed her connection with this mill after 32 years of service, was given a farewell party by the employes this week, including an automobile trip to Rockford Inn, Bedford county.

Albert H. King, overseer of dyeing for the Clover Worsted Mills, Franklin, Mass., has resigned his position with that company.

Maurice B. Goodwin, a loomfixer in Plant B of the Pepperell Mfg. Co., Biddeford, Me., has been promoted to the position of overseer, succeeding John A. Donahue, who resigned recently.

Ralph Edwards, overseer of carding at the Imperial Cotton Mills, Eatonton, Ga., has been put in charge of the spinning department, also.

Frank H. Maloney, for the last three months overseer of finishing for the Columbiaville (Mich.) Woolen Mills, has returned East to accept a similar position with the Wakefield (R. I.) Textile Co. Before going West he was boss finisher for the Holden (Mass.) Textile Co. His son, Paul, also has returned and taken a position with the Wakefield Textile Co.

A. J. Kelley, overseer of carding at the Eastern Mfg. Co., Selma, N. C., has resigned and accepted a position with the Roseboro (N. C.) Mills, Inc.

Harry E. Elder has resigned as overseer for the Asbestos Textile Co., North Brookfield, Mass., to accept a position in Palmyra, N. Y., on Sept. 1.

William Miller has resigned as overseer of the carding and spinning departments of the Fountain Cotton Mills, Tarboro, N. C., and accepted a similar position with the Mansfield Mills, Inc., Lumberton, N. C.

F. C. Wood, formerly employed in the Wymojo Yarn Mills, Rock Hill, S. C., is now overseer of night spinning in the Arcade Cotton Mills of the same place.

Maurice Harcourt, overseer of spinning at the Imperial Cotton Mills, Eatonton, Ga., has resigned.

Noah Baker has been transferred from overseer of carding at the Hart Cotton Mills, Tarboro, N. C., to a similar position in the Fountain Cotton Mills, of the same place.

R. L. Lippard, formerly with the Southern Mfg. Co., Granite Falls, N. C., is now overseer of carding and spinning for the Belmont (N. C.) Fabric Co.

C. L. Gaffney, overseer of the weaving department of the High Shoals (N. C.) Mills of the Manville Jenckes Co., has resigned.

QUESTIONS AND ANSWERS

CORRESPONDENCE WITH READERS

Under this head, we undertake to answer, free of charge, to the best of our ability questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld—EDITOR.

Scouring and Bleaching Underwear Fabric

Technical Editor:

We enclose sample of circular ribbed underwear and would ask you to give us the following particulars: The plant necessary for scouring, together with the method and ingredients used? The plant, method and ingredients for bleaching? Also the kind of machine for drying and pressing? (We will have from 800 to 1,000 lbs. per week.) What size hydro-extractor would you suggest capable of handling the above mentioned quantity? (5870)

The scouring can be done in an ordinary string washing machine equipped with a pair of nip rolls. These washers come in capacities of eight, twelve and sixteen strings each. The cloth should be boiled for about three hours with a 2 to 3% caustic soda and 1 to 2% soda ash; all percentages on the weight of the goods. These quantities may be increased or diminished as necessary. A clean cotton will not require as severe a treatment as a dirty one. This operation removes dirt and seeds from the cloth.

The same machine may now be used for bleaching without removing the cloth. The goods should be well washed after scouring and then given a light sour or acid treatment with hydrochloric acid at a strength of ¼ to ½ deg. Tw. for about twenty minutes. The goods are then washed free from acid. The bleaching is done most economically by chlorine compounds. Ordinary bleaching powder may be used, but a bleach liquor prepared by passing chlorine gas into a solution of caustic soda and soda ash is easier to handle and has a less harmful action on the cloth. The bleaching solution or chemic is made up in fairly strong concentration and then diluted to a strength of 2 to 3 grams per liter of active chlorine for the bleaching operation. The cloth is run around in this bleach solution for about an hour (or until a satisfactory white is obtained, the length of time depending upon the color of the goods). Formulas and instructions for making up a bleach solution can be obtained from manufacturers of liquid chlorine.

After bleaching, the cloth should be given a good wash and then a treatment with sulphur dioxide gas to remove the last traces of chlorine. Sulphur dioxide may be obtained in liquid form in cylinders and it is only necessary to lead a hose connection from the cylinder into the water in the washer. Sulphurous acid is formed and gives a sour and anti-chlor at the same time. One wash is sufficient to remove the excess sulphurous acid from the cloth. If a pure white appearance is desired, the cloth is then given a light blueing.

For lightweight tubular fabrics the pipe drying system is good. Pressing is not absolutely necessary as the cloth comes from the dryer in roll form with all wrinkles removed. One thirty-six inch extractor will handle many times the given production.

* * *

Uneven Filling in Satin Crepe

Technical Editor:

We are sending a sample of boiled-off satin crepe. We would like to have your opinion on what causes the abrupt changes from the smooth cloth to the crinkled in the places we have marked with a blue pencil. (5866)

These changes are caused by the unevenness of the filling in the satin crepe, and are more noticeable on the sample because it has not been finished. This is nothing to worry about as the changes will be barely perceptible after the goods are finished.

* * *

Harnesses for Leno Fabric

Technical Editor:

I would ask you to kindly settle the following argument in regard to the enclosed sample. A claims that the fabric is made on 10 harnesses, 4 for ground (2 and 2), 4 for the leno (2 and 2), and 2 for the selvage. B claims the fabric is made on 7 harnesses. Kindly answer in just a few words and oblige. (5867)

Both are wrong. The pattern submitted required 11 harnesses as follows: 4 for each leno block = 8; 2 for outline cords; and 1 for selvage catch cord; making a total of 11. The selvages are woven on the harnesses that are used for the outline cords, but a catch cord harness is used to prevent the filling from drawing through the shed when weaving the four picks of filling cord. To be woven correctly, this pattern should be drawn on 12 harnesses, as follows:

4 for each leno block	8
2 for outline cords	2
2 for selvages	2
Total	12

* * *

Yarn Yield from Wool Mix

Technical Editor:

Will you please give us some information on the following subjects: In mixes put down of 2,000 lbs. of 2/20s cut stock, the mix consists of 45% wool, 30% noils, and 25% of good waste. How much actual twisted yarn should be produced from these 2,000 lbs? Another batch of 2,000 lbs. is placed for 2/10s yarns. It consists of 30% wool, 20% noils, and 50% waste. How much actual yarn should be produced from such a batch? (5871)

The agent of a mill who has run similar lots states that the mix containing 45% wool, 30% noils, and 25% good waste, should give in his estimation about 92% yield, or about 1840 lbs. of twisted yarn, under favorable conditions. He states that the other mix consisting of 30% wool, 20% noils, and 50% good waste, should give about 90% yield, or 1785 lbs. of yarn.

A carder of long experience states that the first lot should give a yield of between 90 and 95%, and the second lot should yield 85 to 90%.

* * *

Yarns Uneven in Stocking

Technical Editor:

Enclosed is an unfinished stocking from a 176-needle, 3¾ in., 36 gauge knitting machine. The yarn used was two threads of single 30s in the leg and foot, and three threads of single 40s in the heel and toe. The writer of this letter claims that this is bad knitting. Kindly advise us what you think of it. (5825)

We have raveled the yarns in this stocking and feel the trouble is not in the knitting but that the yarns are uneven.

* * *

Metal Coating for Tanks

Technical Editor:

We have a 3000 gallon hot water tank made of steel and heated by means of copper steam coils. The tank is set right on the water line and the water pressure is about 50 pounds. This tank has the defect of giving water of a yellowish appearance, due probably to rust. We have been using for about six months a compound made principally of silicate of soda but, although this method has given a slight improvement, it has not been really successful. We have heard of metal spraying processes. Could they be used in order to give to the tank an inside lining of copper and, if they can, what concerns do that kind of spraying? (5872)

A metal coating can be sprayed on the tank by the Schoop process, as put out by the Metals Coating Company of America, 495 North Third St., Philadelphia, Pa. In reply to the question on coating metal tanks they state that such work is being performed daily at costs which come well within commercial limits. For providing protection against corrosion electro-positive metals should be used, and zinc and aluminum are largely used for this purpose. If acid conditions prevail, lead gives excellent results, and in many cases, combination coatings are used. So it will be understood that the exact conditions that exist should be known so that a proper metal may be selected for the service, or a combination of metals. Any of the commercial metals may be readily applied.

* * *

Lathes Used by Textile Mills

Technical Editor:

What sizes of lathes as well as attachments for lathes are usually specified and in use in the repair shops in textile mills? (5860)

The following is a list of lathes used in a large worsted mill repair shop:

9″ x 4′ 9″ engine lathe.
11″ x 4′ speed lathe.
14″ x 6′ engine lathe.
14″ x 7′ engine lathe.
15″ x 6′ engine lathe.
15″ x 6′ 5″ tool-maker's lathe.
15″ x 9′ engine lathe.
16″ x 6′ engine lathe.
16″ x 7′ engine lathe.
16″ x 8′ engine lathe.
16″ x 8′ pattern maker's lathe.
16″ x 10′ engine lathe.
16″ x 12′ wood turning lathe.
17″ x 12′ 3″ speed lathe.
18″ x 6′ 4″ engine lathe.
18″ x 8′ engine lathe.
18″ x 12′ engine lathe.
20″ x 8′ engine lathe.
24″ x 10′ pattern maker's lathe.
24″ x 18′ extension gap engine lathe.
30″ x 22′ 9″ engine lathe.
[illegible]″ x 24″ flat turret lathe.
3″ x 36″ flat turret lathe.

We have asked a textile mill machine shop foreman to give the minimum equipment for a medium size textile mill machine shop. His list follows, but we believe that he would need more lathes, as it will be noted that he has listed only five, including the speed and turret lathes:

1 26″ x 16′ or 20′ lathe.
1 18″ x 5′ lathe.
1 14″ x 8′ lathe with taper attachment.
1 speed lathe.
1 2″ x 24″ flat turret lathe.
1 24″ upright drill.
1 4′ radial drill.
1 two-spindle high-speed drill.
1 24″ shaper.
1 24″ x 24″ x 8′ planer.
1 No. 2 milling machine.
1 automatic gear cutter No. 2.
1 No. 2 universal grinder.
1 No. 3 emery wheel.
1 grind stone.
1 power saw (metal cutting).
1 twist drill grinder.
1 42″ boring mill.
1 No. 2 key-seating machine.
1 bolt-cutting machine.
1 No. 3 arbor press.
1 No. 6 hand miller.

The above list applies only to the machine shop.

Regular equipment usually consists of a double friction countershaft, back gears, quick change gears, compound rest, steady rest, power cross-feed, automatic stop for feeding and for screw-cutting.

Extra equipment will include taper attachment (this is advisable to have on one machine, say the tool-maker's lathe) double back gearing on the

Competition Grows Keener—

The section which is growing industrially today is that in which conditions affecting *all* phases of modern business are favorable to efficient operation. Competition grows keener, economic pressure is steadily becoming stronger, and no longer can industry afford to consider the claims of sections with some one outstanding industrial asset, but lacking in the others.

It is because of the *combination* of attractions it offers that Georgia is receiving the serious attention of industrial executives. The rapid growth of Georgia industrially in recent years is explained by the change which has come about in modern business, the greater attention which is being given to each small detail of factory operation, the recognition by industrial executives that modern competition will not permit any detail to be overlooked.

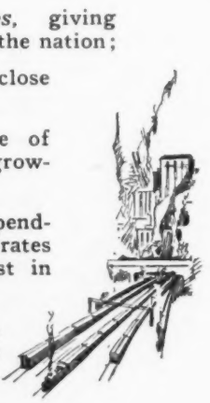
Here, in Georgia are found all of the elements of successful industrial operation, in unusual combination, including:

Raw Materials, in great variety and abundance within easy hauling distance;

Labor, intelligent, native-born workmen, chiefly of Anglo-Saxon extraction;

Transportation Facilities, giving quick access to all parts of the nation;

Ocean and Gulf Ports, in close proximity;



Markets, for every type of product in a wealthy and growing section;

Hydro-Electric Power, dependable and in abundance at rates comparable with the lowest in the nation;

Climate, without extremes of heat or cold and suitable to year-round industrial operation;

Water, of tested purity and in abundance;

Friendly Public Sentiment, which welcomes newcomers and gives them every encouragement;

Low Taxes, and exemption from taxation for five years offered to new industries by many localities.

GEORGIA RAILWAY AND POWER CO.

ATLANTA

Correspondence with Readers—Continued

large 24" or 26" x 18' machine, (also have the extension gap on this). It is well also to have for this lathe some raising blocks so that a 16 in. size can be raised to a 22 in. and 18 in. to a 24 in., or a 24 in. to a 30 in. If the shop has a fair-sized boring mill it will not be necessary to have an extension gap machine. Where a shop does not have a milling machine or a key-way cutting machine, it is possible on some makes of lathes to obtain attachments for doing these two classes of work. This, however, is the exception, not the rule.

Some makes of plain lathes have semi-automatic turret heads that can be mounted either on the bed or on the carriage. Full automatic turret or screw cutting lathes are not as a rule used in textile mill shops because there is not enough duplicate work. Every shop should have one or more semi-automatic turret lathes for making small parts in numbers.

* * *

Further Discussion of Thrown Silk Sizes by Mr. Lewin

Technical Editor:

We should be glad to hear more about calculating sizes of thrown silk. Both the Chittick and the Lewin articles printed in the June 12 and July 3 issues of TEXTILE WORLD strike us as extremely interesting.

We disagree, however, with some of Mr. Lewin's remarks. For instance, how does he know his warping machines are accurate? The wooden arms vary with the weather; even if the first band is accurate, the second piled on the first is somewhat larger, and the last, which would approximately be the hundredth band, has a diameter of at least one inch more, or a revolution length 3" longer than the first one.

Further, unless his weighing room is carefully conditioned in July and August he is weighing silk with a 13% regain, and in the winter in a steam heated unconditioned room with only 8% regain.

CHARLES J. KNOWLES, Pres.
Pen Argyl Silk Company,
Pen Argyl, Pa.

The above letter was submitted to Mr. Lewin and he replies as follows:

I have read very carefully the letter of Mr. Knowles, of the Pen Argyl Silk Company. The technical matters which he brings up have theoretically a sound basis for argument. His first point has not been ignored by us in our previous calculations. The build on the warping mill is not an appreciable item, and in confirmation of this we are giving the following arguments:

Quite a number of georgette warps, which were made from 600 to 800 yards long, have in the past been very carefully re-measured by putting them in a frame and running them over the mill direct on to a beam. There was absolutely no chance for the yarn to build up and only a single layer of the warp came in contact with the warping mill.

A re-measurement of these warps showed the measurement was correct to within one-quarter of 1%. The build of a 3-thread georgette warp is not nearly as much as one inch, and in fact is considerably less than one-half of this amount. We find that it runs nearer to one-quarter of an inch, which would increase the total diameter on the last lap one-half an inch, or make the last run approximately one and one-half inches longer than the first. This of course applies only to the last laps of the warp. Taking an average from the beginning, where the diameter of the first revolution is correct, and the diameter of the last revolution is one-half inch greater, the average diameter would not be over one-quarter of an inch per revolution larger.

Inasmuch as the georgette warps on the quality on which these tests were made was 640 yards long, and the mill is 8 yards in circumference, we had 80 revolutions of the mill to complete the warp. If the average diameter is one-quarter of an inch greater than the regulation 8 yards, it would mean that there is approximately three-quarters of an inch more yarn on each revolution, or 60 inches in the entire warp. This is one and two-thirds yards on 640, or a difference of approximately one-quarter of 1%. This corresponds accurately with the re-measurements of the warps which have been tested in the past.

Further proof that this is not an appreciable item lies in the fact that in the present method of warping, where a motion is in use, the outside ends lie on the warp mill single and are not piled up at all. If there were any great variation of length caused by the build, this outside section would become very tight and ruin the cloth in the weaving and dyeing. But this defect has never crept in. The motion on a warping frame moves on an average of 1 inch for every 100 yards, so it can readily be seen that the outside ends are practically a single layer on the warp mill, whereas all the remaining sections are 80 fold.

Pieces Not Appreciably Shorter

Further tests on these same points were made some time ago on 50 specially made warps. The cut marks were put in extremely accurately, particularly the center cut marks. These warps were given to the best weavers with instructions to cut off exactly at each cut mark. A careful tabulation of these warps was made at the completion of this test and it is a peculiar fact that without exception the entire 50 warps had a greater woven yardage for the first five pieces than for the last five. To quote the figures exactly, the first five pieces from each warp totaled up to slightly under one-half of one per cent greater yardage than the five last pieces. Warps were all 640 yards and these specially made warps showed an average of 302 yards for the first half of the warp in woven cloth, and 300¼ yards for the last five pieces of each warp.

The expansion of the wooden staves, according to my mind, are nil and this is confirmed by the manufacturer of the frames. The most seasoned wood is used for the purpose. Of course there is one other point that comes up in this matter and that is the fact that there is slightly more waste at the end of a warp than there is at the beginning. The twisting thrum and waste usually average about one-half to three-quarters of a yard at the beginning, whereas the unwoven thrum at the end of a warp, with the hold fast, will average about one and one-half to two yards. Even if we add this extra one and one-quarter yards difference to the last half of the warp, we still are a trifle ahead on the first half. The tensions on these test warps were watched as carefully as possible to keep them uniform.

This of course is the practical result of this series of tests and is not in keeping with theoretical reasoning. However, facts are facts. After all, the main object is to get down to an average working basis, and to the writer's mind the difference in circumference on a warp mill, due to the build of the yarn, is not an appreciable item to be taken into consideration, unless the warps are made of an extremely heavy yarn.

Even assuming that the point made by Mr. Knowles has a direct bearing, and that the warps are slightly longer, this would automatically be taken care of in the next calculation step, as the yield in woven cloth against the unwoven calculated length of the warp would be just that much greater, and as this item is watched carefully by all competent manufacturers this would automatically reflect itself in the net price of the woven cloth.

Moisture in Silk

The matter of conditioning during July and August is a point that is not relevant in this argument. The throwing mills, we are forced to assume, have their plants reasonably well conditioned in both summer and winter and when the silk leaves a throwster it should contain approximately the correct normal amount of moisture.

If the yarn used for the test was of our own throwing, the entire five or ten bale lot was laid aside and used up for warping and the poundage was figured on the raw thrown weight, regardless of the weight returned from the throwster.

When shipments were bought already thrown they were re-weighed and it is true that very often we found them underweight. This condition showed as a rule that the moisture content was low. The conditioning slip showed that there was no reasonable claim to be made because the silk had dried out. The silk was put into work and figured in the test at the charged or correct conditioned weight, regardless of what the re-weighing showed, but always at the poundage for which the bill was passed. Tests were always made on complete cases or lots.

After all, textile calculations for poundage are fundamentally based on yardage, and if a shipment is charged at 1,000 lbs. to the mill, we want to see how many yards of yarn are in this 1,000 lbs. for which we pay. Even if this shipment should lie several weeks in a steam heated plant and dry out 3%, and the reweighing showed 970 lbs., we do not take the test as 970 lbs., but as 1,000 lbs.

IRVIN LEWIN, Treas.,
Lang & Lewin, Inc.,
Astoria, L. I.

* * *

TEXTILE WORLD, New York City:—

Gentlemen:—We thank you very kindly for the information given us in your letter of Jan. 30th and if at any time we can reciprocate the favor kindly call on us.

Yours very truly,
RAGAN KNITTING CO.

A History of TEXTILE WORLD

Editor TEXTILE WORLD:

I receive my TEXTILE WORLD weekly and I know it is the best textile paper printed. Would you tell me how many years you have printed TEXTILE WORLD as I have one published by Guild & Lord, dated August, 1889. To read this today is very interesting.

Thanking you for information wanted.

JAMES F. MORAN,
Lawrence, Mass.

Wade's *Fibre & Fabric* was started in March, 1884, by Wade & Miller. After the first two or three issues Miller, retired. H. G. Lord, who had been with the concern from the start, purchased Miller's half interest and was joint owner with Wade until the latter part of 1887, when he formed a partnership with Mr. Guild, starting TEXTILE WORLD, the first issue of which appeared in January, 1888.

The *Manufacturers Review & Industrial Record*, the first issue of which was published in August, 1868, was purchased by Mr. Lord in 1896 and merged with TEXTILE WORLD. The *Textile Record*, of Philadelphia, was established in 1880 and this was merged with TEXTILE WORLD in 1903, the name being changed to *Textile World Record*. In 1915 *Textile World Record* and *Textile Manufacturers Journal* were merged to form TEXTILE WORLD. It therefore can be strictly claimed that there has been continuous publication of what is now the TEXTILE WORLD as direct lineal descendants from 1868.

As a matter of incidental interest it may be stated that the earliest files of these papers are in our office. They contain certain advertisements which have been running uninterruptedly ever since and are still continued in TEXTILE WORLD.

Toronto, Ont. The Bruck Silk Mills, Ltd., Cowansville, Que., have moved their Ontario office from the McKinnon Building to 94 Wellington St., West, where a larger display space will be available.

The new dull finishes can be easily produced

BRIGHT days lie just ahead for the dull-finish fabric. Wearied of over-much luster, the public is now veering, as usual, toward the other extreme. It wants richness still, but a richness that is more restrained, more subtle.

To secure the desired effects, alert manufacturers are using Celanese brand yarn. Finishes of any desired degree of dullness are imparted to the fabric, right at the dyehouse, in a manner simple, sure, and exceedingly economical. These finishes are permanent under all conditions of service. *They can be applied to Celanese brand yarn, alone.*

Patterns in self-tones may easily be secured by passing the dull-finished fabric under a hot printed roller.

We shall gladly provide detailed information upon request

CELANESE
REG. U.S. PAT. OFF.
BRAND YARNS

The AMERICAN CELLULOSE & CHEMICAL MANUFACTURING COMPANY, *Ltd*

15 EAST 26TH STREET, NEW YORK

WORKS AT AMCELLE (NEAR CUMBERLAND) MARYLAND

CELANESE is the registered trademark, in the United States, of The Americacn Cellulose & Chemical Manufacturing Company, Ltd., to designate its brand of yarns, fabrics, garments, etc.

NEW MACHINERY AND PROCESSES

Chargers and Control

Equipment for Charging Batteries Used in Trucks

As a result of modifications of design, the General Electric Co. is now marketing a complete new line of battery charging equipments in uniform frame sizes. These equipments consist of (1) motor generators, and (2) unit control sections. They are particularly applicable to the multiple charging of batteries used in electric industrial trucks, electric road trucks and storage battery locomotives.

The motor generators are designed to operate at speeds running from 1,800 r. p. m., for the sizes up to 35 kilowatts, to 1,200 r. p. m. on larger sizes. Stocks will be carried of outfits for such special voltages as 32, 45 and 55, together with the standard 115-volt type. Especial attention has been paid to liberality of design. Commutators and brushes have ample capacity for the high currents required with respect to the KW. rating.

The generators are flat compounded between no load and three-quarter load, and have slightly drooping characteristics beyond the three-quarter load point. The rise in voltage between these two load points is comparatively small. A complete new line of unit control sections for these motor generators has been announced. These will be furnished either as part of the complete charging equipment or separately. An important feature of the design is compactness, making it possible to control a large number of circuits in a limited space.

The general line consists of two-circuit sections designed for manual control of the charging rate and the terminating of the charge by means of a contact-making ampere-hour meter located on the truck. Such a section includes, for each circuit, a dial switch for the resistor; a meter reading switch; an indicating lamp; a double-pole, undercurrent and shunt-trip contactor with two auxiliary circuit contacts; a fuse mounted conveniently on the back of the board, and a resistor, also on the back of the board.

By means of the indicating lamp the operator can tell when the battery is connected to the section. The current is controlled and adjusted by turning the dial switch handle. Amperes and volts are read by the meter-reading switch in connection with a voltmeter and ammeter common to all circuits.

Overcurrent protection is provided by the fuse, and protection against reversal is furnished by the undercurrent contactor. Automatic shut-down at the end of the charge is accomplished by the shunt trip device which is an integral part of the under-current circuit breaker, this circuit being energized from the line and completed through an ampere-hour meter mounted on the electric truck or locomotive.

An important feature of the construction is the ease with which a single section with its two resistors may be removed in a unit if necessary. This is accomplished by removing four cap screws at the corners of the panel and detaching the vertical bus bars from the back of the resistor supports. The entire section may then be easily slid out.

Any number of control sections can be combined with generator sections to make a complete panel. Various modified forms of sections are available and will be furnished for any set of circumstances, thus covering every condition of battery charging.

Backwinder for Silk

High Speed Spindle Gives Large Capacity

A backwinder for full fashion service and embodying several new features has recently been placed on the market by Jacob K. Altemus, Philadelphia, Pa., and is designated as Type 2-B No. 25. This new machine insures high speed rewinding of silk yarns without danger of splitting the yarn or cutting the porcelain yarn guides. It is equipped with self-oiling bearings.

The spindle speed is 1450 r. p. m., and the capacity per minute per spindle is 325 yds. This allows for winding back over 2 2/5 lbs. of a 5-thread silk in an 8-hour working day. The output on 27 spindles is 64 lbs. per 8-hour day. This production is declared possible when a normal barrel-shaped wind is used, but a full swell wind will allow for a greater yarn content per cone. The knitting yarn package is patented.

There are emulsion rollers placed above the spindles in such a manner that a constant and uniform application of the emulsion is assured, since the thread runs over these rollers continuously and is carefully controlled.

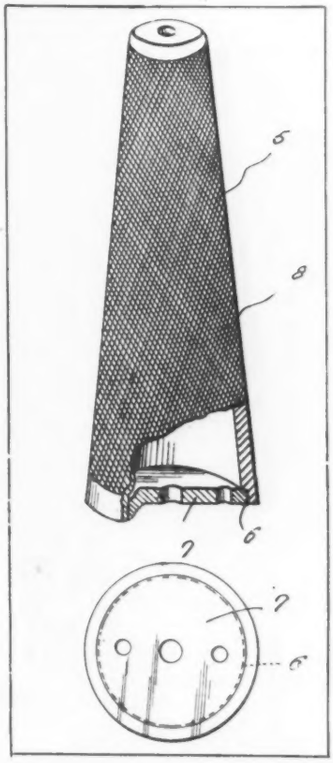
Jacob K. Altemus declares that with this new type machine there will by no underwind, and that seconds and press-offs will be less numerous; while with such high speed, the cost per spindle will be less and a finer grade of hosiery may be manufactured from the backwound yarn.

*PROVIDENCE, R. I. The Crescent Braid Co., Inc., recently noted incorporated with capital of 100 shares of no par value stock, has started the manufacture of wire products, cables and cords in leased quarters at 289 Thurbers St.. I. J. Schwed is president of the new company, and E. S. Sapinsley, treasurer.

Interchangeable Bobbin

Removable Base Improves Machining and Extends Use

The accompanying illustration shows an interchangeable bobbin recently patented (U. S. patent 1,590,539) by A. D. Muller, 873 Cooper St., Beverly, N. J. It is equipped with a removable base, which permits proper machining of the interior for securing an even balance of the bobbin and also makes possible the use of a number of base plates for adapting the bobbin to practically any spinning machine or machine of similar type. A further detail of the invention is a knurled exterior of the body which provides a roughened surface for preventing the slipping of the thread or yarn.



Bobbin With Removable Base

The bobbin consists of a hollow frusto-conical body 5 (see drawing) that is open at its enlarged end and internally threaded at 6 for receiving an interchangeable disk-like face 7 which may be made to suit any type of spindle. The material used in the construction of the bobbin is a non-corrosive metal, which is not affected by moisture or softeners, does not require constant shellacing, will not split or chip off, and is practically indestructible.

RECENT TEXTILE PATENTS

COTTON gin. 1,596,228. Frank F. Balusek, Needville, Tex.

COTTON, Humidifying finisher laps of. 1,596,715. James L. Byers and Robbert S. Mitchem, Alexander City, Ala.

DYE and making, Anthracene. 1,596,528-9. Ivan Gubelmann, South Milwaukee, Wis. Assignor to The Newport Chemical Co., Milwaukee, Wis.

DYE and manufacture, Anthracene. 1,596,130-1. Ivan Gubelmann, South Milwaukee, Wis. Assignor to The Newport Chemical Co., Milwaukee, Wis.

DYESTUFF of the anthraquinone series, Oxazine. 1,596,460. Robert E. Schmidt and Berthold Stein, Elberfeld, Germany. Assignors to Grasselli Dyestuff Corp., New York, N. Y.

EXTRACTORS, Safety device for. 1,596,696. James O. Tow, Chicago, Ill. Assignor to The American Laundry Machinery Co., Norwood, O.

FABRICS, Machine for making knitted pile. 1,596,527. Alfred A. Grundy, Phila., Pa. Assignor of one-third to said Alfred A. Grundy, one-third to George Grushlaw, and one-third to John Sichel, all of Phila., Pa.

LOOM shuttles, Yarn tensioning for. 1,595,708. George M. Cheney, Southbridge, Mass. Assignor to Litchfield Shuttle Co., Southbridge, Mass.

LOOM, Terry-pile-fabric. 1,595,289. Augustin J. Chevrette, Worcester, Mass. Assignor to Crompton and Knowles Loom Works, Worcester, Mass.

LOOMS, Filling-feeler mechanism for. 1,595,941. Simeon S. Jackson, Boston, Mass. Assignor to The Stafford Company, Boston, Mass.

LOOMS, Friction let-off for. 1,595,265. Richard G. Turner, Worcester, Mass. Assignor to Crompton and Knowles Loom Works, Worcester, Mass.

LOOMS, Harness motion for. 1,595,271. William M. Wattie, Worcester, Mass. Assignor to Crompton and Knowles Loom Works, Worcester, Mass.

LOOMS, Warp stop motion for. 1,595,543. Harry A. Davis, Hopedale, Mass. Assignor to Draper Corporation, Hopedale, Mass,

TENSION and let-off device. 1,595,380. Carl V. J. Christensen, Attleboro, Mass. Assignor to Wardwell Braiding Machine Co., Portland, Me.

TEXTILE machinery, Brush for cleaning. 1,595,726. George L. Pierce, Lowell, Mass.

TEXTILE-marking machine. 1,595,364. Walter G. Spain, Danville, Va. Assignor to Kaumagraph Co., New York, N. Y.

WEFT-detecting mechanism. 1,595,249. Eppa H. Ryon, Waltham, Mass. Assignor to Crompton and Knowles Loom Works, Worcester, Mass.

YARN-winding machines, Stop motion for. 1,595,705. John J. Cannon, Leicester, Eng.

YARNS, cords, ropes, slivers, and the like, Machine for winding. 1,595,818. Henry J. W. Bliss, Leeds, Eng. Assignor to The British Research Association for the Woolen and Worsted Industries, Leeds, Eng.

A CHEMICAL PRODUCT *by* MASTER CHEMISTS

DU PONT RAYON

Du Pont Chemical Control Assures du Pont Quality

DU PONT RAYON

Reg. U. S. Pat. Office

DU PONT RAYON CO.

BUFFALO, N. Y.

Cross-Bar Elimination

Methods Employed for Evening Warp Let-Off

By Carl A. Luft

For the purpose of maintaining a uniform let-off of the warp during the weaving operation, silk looms are equipped with a rope or chain friction device on the loom beam. This consists essentially of a rope that encircles the loom-beam head several times and has attached to one end a heavy weight, while to the other end is fastened a much lighter counterweight. During the operation of the loom, the warp is slowly drawn from the loom beam and woven into cloth. If a heavyweight fabric is being made, little difficulty will be encountered in regard to the unwinding of the warp, but if a lightweight fabric having a low number of picks per inch is being made, the uneven let-off of the warp may become apparent. This is especially true when light satin fabrics, messalines, also certain crepe fabrics and so on, are being woven.

If the warp is let off with an intermittent motion, bars will be formed across the fabric. These are referred to by different names, such as cross-bars, shires, barré marks, and so on. At times it is extremely difficult to eliminate the foregoing difficulties, and the loom-fixer's ingenuity is frequently taxed to obtain perfect cloth. Probably the most common remedy is to freely apply talc or powdered soapstone to the ropes, working it between the several coils and also under the ropes. Besides talc, graphite is also used; however, while very serviceable, it is objectionable since it is dirty to use.

Various mechanical contrivances have been devised in the mill machine shops that are slipped on the ropes and act with the motion of the beam, causing the ropes to slide more freely and let off the warp more uniformly. Of these devices, one of the simplest and also one of the most satisfactory is a small metallic casting shaped somewhat like a collar button. Several of these are slipped between the strands of the ropes at intervals in the lengths of rope encircling the beam head. The effect of this is to keep the ropes separated so soapstone or graphite may be sprinkled thereon and easily worked between the ropes and the pulleys. Moreover, the coils of the ropes, since they are kept apart, will not bind so firmly on the pulleys. The smooth, uniform let-off thus obtained will result in the production of a fabric that displays no cross-bars.

July Wool Mill Activity

WASHINGTON, D. C.—The Department of Commerce has announced statistics on active and idle wool machinery for July, 1926, based on reports received from 931 manufacturers, operating 1,109 mills. This is exclusive of 10 manufacturers, operating 18 mills, who failed to report for the month. The accompanying table gives the percentages active and idle, and comparative figures for June, 1926, and July, 1925:

	Looms						Spinning Spindles	
Month	Wider than 50 in. reed space	50 in. reed space or less	Carpet and rug	Sets of cards	Combs	Woolen	Worsted
	Per cent active of total number of machines							
July, 1926.	54.8	63.5	64.8	72.5	66.9	68.7	60.3
June, 1926.	56.6	64.0	65.1	74.4	63.0	70.3	62.2
July, 1925	63.6	69.9	73.2	78.6	65.5	76.4	60.6
	Per cent active of total hours (maximum capacity)					single-shift	
July, 1926.	52.6	52.6	54.9	67.7	67.8	65.9	55.7
June, 1926.	57.2	57.4	58.1	74.5	67.8	71.1	59.1
July, 1925.	60.7	51.6	65.4	79.8	65.0	78.6	53.9

Care of Floors

Random Notes Made by a Mechanical Superintendent

The top floor boards in the trucking lanes should always be laid parallel to the direction of traffic so as to facilitate the laying of new boards when repairs become necessary.

Badly splintered floors, particularly in the trucking lanes, should not be tolerated, as serious accidents may result from splinters getting into the feet of employes.

Wood floors should be kept as free from oil as possible. Oil-soaked floors are great fire and accident hazards.

Scrub-women often use too much soap in washing factory floors. As a result the floors are rendered slippery immediately after washing, and many accidents, some serious, have resulted.

Concrete floors and machinery foundations should be kept free from oil, which if allowed to remain will render the floor porous and cause the concrete to crumble.

The floor under driving heads of such machines as roving and spinning frames should be protected from oil by tin, zinc or galvanized metal sheets soldered at the joints so as to make them tight.

Power Data Sheets

By F. S. Root

POWER REQUIRED TO OPERATE KNITTING MILL MCHY. (1)

PRODUCT.
Men's Knitted Underwear
AVERAGE OUTPUT.
1275 Garments Daily.
All yarn used purchased.

MOTORS & LOADS

1-25 H.P. motor, driving a shaft carrying three Gessener tappers.
1-20 H.P. motor, belted to line-shaft, carrying 34 Wildman latch-needle knitting machines, of 14 + 20-inch diameters.
1-15 H.P. motor, belted to a line-shaft, driving 13 Wildman latch-needle knitting machines. (18"×12")
1-10 H.P. motor, belted to a line shaft, driving 11 Wildman latch-needle knitting machines (19"×22" dia.)

POWER REQUIRED TO OPERATE KNITTING MILL MCHY. (CONT.) (2)

4-7½ H.P. motors, individually belted to tables, each carrying 36 Union Special seamers and seam coverers.
4-5 H.P. motors, each belted to a table driving 36 assorted mates of sewing-machines.
1-5 H.P. belted to a line-shaft driving 10 Cooper rib machines.
1-3 H.P. motor, belted to a line-shaft, driving 5-48-end winders.
1-3 H.P. motor, belted to a line-shaft, driving 10-40-end winders.

TOTAL CONN. LOAD.
15 MOTORS. TOTAL H.P. RATINGS = 130 H.P.

POWER REQUIRED TO OPERATE A SMALL KNITTING MILL (3)

PRODUCT.
General line of knit goods.
AVERAGE OUTPUT.
60 Doz. garments daily.
All yarn used is purchased.

MOTORS & LOADS.

1-20 H.P. MOTOR, belted to 17 ft. line shaft, and driving 11 Scott+Williams circular interlock knitters of the following diameters, 1-17", 1-16", 2-15", 1-14", 1-13", 1-12", 1-11", 1-10", 1-8".
One G.W. Payne 48 spindle one cloth-turner.
One 5 K.W. lighting generator.
1-5 H.P. MOTOR, belted to a 45 ft. line-shaft, driving the following—
One Singer seamer.
Two Metropolitan seamers.

POWER REQUIRED TO OPERATE CARPET & RUG WEAVING MCHY. (CONT.) (4)

30 H.P. MOTOR, belted to two shafts, totalling 300', and driving—
24-spinning machines
1—18"×183" hay-conveyor.
5 H.P. MOTOR, belted to 30 feet of shafting, and driving—
1—American 24" Planer,
2—American 6" Lathes,
1—Power Hack-saw,
2—Barnes Drills,
1—Emery-wheel
5 H.P. MOTOR, driving a Bailey 5 foot fan. (on the heating-system.).
2 H.P. Motor belted to 40' shaft, driving 9 Singer Sewing machines.
½ H.P. Motor, belted to 15' shaft, driving 4 Singer Sewing Mchs.
½ H.P. Motor, driving Singer carpet-splitting machine.

Above is presented the twentieth group of a series of records showing power required to operate various machines.

Plans for Greenville Show

Large Annex to Textile Hall Necessary to House Exhibits

GREENVILLE, S. C.—W. G. Sirrine, president of the Southern Textile Exposition announced last week that all the plans for the next exposition, Nov. 1 to 6, in Textile Hall are completed.

Through the cooperation of Mrs. J. W. Atkinson, D. Wardlaw Moore, Sam R. Zimmerman and the executors of the estate of James H. Woodside, the land adjoining Textile Hall has been secured for a large steel annex. This will be supplied by the Truscon Steel Co. through its local representative, the Greenville Steel & Foundry Co. The annex will be 200 feet long and 60 feet wide, and will house many important exhibits.

Every committee has been appointed and is at work. The program for the week is being laid out by the Citizens' Committee, of which Capt. Reid Elkins is chairman, and all the other committees are closely cooperating with them. There will be something going on every day during the Exposition, the principal event being the Convention of the Southern Textile Association. The arrangements for the entertainment of this body is in the hands of the Convention Committee, of which Edwin Howard is chairman.

The color scheme of the decorations this year will be dark green and white. Mrs. B. T. Whitmire is the official decorator.

Earle Mauldin, who is now a resident of Florida, has consented to return to Greenville and be associated with the exposition as manager. Mr. Mauldin thoroughly understands the work of exposition management and is personally acquainted with practically every exhibitor. He is an experienced engineer and contractor and will have charge of the erection of the steel annex and the putting of the equipment therein.

S. T. A. Convention at Greenville on Nov. 5

The Southern Textile Association will hold its regular fall convention at Greenville, S. C., on Nov. 5, 1926. This date is during the Southern Textile Exposition which will be held at Textile Hall, Greenville, Nov. 1 to 6. In all probability the usual S. T. A. banquet will give place to a luncheon on Nov. 5 as the association executives believe that this change will meet the convenience of the greatest number of members and result in best attendance.

Army Asks for Bids on Tape and Leggin Cloth

PHILADELPHIA.—Proposals for supplying the Depot Quartermaster, U. S. Army, with 621,706 yds., olive drab cotton tape and 67,213 yds., of leggin cloth, have been invited. These bids will be opened at the depot, 21st and Oregon ave., Sept. 7, at 10 a. m., eastern standard time, both materials meeting Government specifications.

They Washed a Sock 21 Times

without washing out their trademark

[Based on an interview with Mr. J. A. MORGAN, of the BROWN DURRELL CO.]

To test out the durability of the trademark on Gordon Hosiery, Mr. J. A. Morgan of the Brown Durrell Company kept a record of one pair of socks worn by his little daughter. Back and forth to the laundry this pair of socks went—21 trips in all.

When holes appeared, the socks were darned, then worn and washed again. But after the 21 washings the little Gordon Hosiery trademark on the toe was still quite as legible as when the sock came out of the box brand new. Even 21 washings had failed to wear out the mark!

But the Brown Durrell Co., makers of Gordon Hosiery, did not always enjoy such satisfaction with the permanence of its markings. In fact, applying this trademark used to be one of their urgent problems, when they used to stamp their trademark on hosiery with a wet transfer. For the mark quickly rubbed off and disappeared. After one washing it was usually impossible to identify the brand as Gordon Hosiery.

And Brown Durrell Co. rightly felt that as a result they were losing a valuable tie-up with their advertising efforts.

Water Spotting Now Prevented

But besides the lack of durability the wet transfers were far from satisfactory in many other respects. They caused frequent water spotting. They damaged hosiery. Literally gallons of cleaning fluid had to be used to sponge wet goods. It was a nuisance and an expense.

But about two or three years ago, Brown Durrell was emancipated from their trademarking troubles, when they adopted the Kaumagraph DRY Transfer method of marking.

What a difference! For, according to Mr. Morgan of the Brown Durrell Co., this method has eliminated spoilage from water spotting; the mills prefer this method because it is easier to apply, and above all the mark actually lasts as long as the hosiery itself. "The permanence of the Kaumagraph-applied mark," says Mr. Morgan, "is a big help in our advertising campaign because it keeps the word Gordon on the hosiery indefinitely."

Uses Lithographic Service, Too

Mr. Morgan states that the Brown Durrell Co. also enjoys unusual satisfaction with the Lithographic Service Department of the Kaumagraph Co. The beautiful three-color Gordon hosiery package, to which the illustration shown here scarcely does justice, is a sample of the work of this Department.

The trademark transfer on the stocking at left was applied with Kaumagraph Transfers. The Gordon box label, illustrated below, was produced by Kaumagraph's Lithographic Department. In the original this box is a beautiful red and green and gold.

Kaumagraph is the only company that offers the twin service of trademark transfers and hosiery packing. You will find, as others have found, that it is a great convenience to buy all such requirements from the same one source. Send today for samples of Kaumagraph Lithographic work and Kaumagraph Transfers and learn why the entire textile industry has hailed Kaumagraph's Twin Service as a boon.

KAUMAGRAPH CO.,
350-356 West 31st St., N. Y.

Please send full information regarding Kaumagraph Twin Service.

Name.....

Address.....

T.W.9-4

MILL NEWS

COTTON

New Construction and Additions

PIEDMONT, ALA. The Standard-Coosa-Thatcher Co. has built an addition to its office and installed a complete distributing system in the opening room of the plant.

SPINDALE, N. C. The Spencer Mills Co. has awarded contract for the erection of 15 homes for employes. All will have modern conveniences and will be comfortable and attractive. Hix Hill is the contractor.

TARBORO, N. C. The Fountain Cotton Mills have installed 2,000 new spindles, increasing the total spindleage of that plant to 14,256.

CHESTER, PA. The Aberfoyle Mfg. Co. has awarded a general contract to W. Provost, Jr., Chester, for a one-story and basement addition to its mill, 57 x 71 ft., brick and reinforced concrete, on which work will begin at once.

JACKSON, R. I. The Jackson Mills, Inc. have installed a 120 h. p. engine so they are no longer dependent for operating power upon water, as in the past. The two water wheels which have run the mills since they were built in 1820, will continue to be the main power unit however.

*GAFFNEY, S. C. The Gaffney Mfg. Co. is completing construction of 100 new houses for operatives.

ROCK HILL, S. C. The Wymojo Yarn Mills have secured a building permit for a small addition to their plant.

*DALLAS, TEX. The C. R. Miller Mfg. Co. has virtually completed the installation of 5,000 additional spindles in its Dallas plant and expects to have the new equipment in full operation by Sept. 15. The original building, 410 x 104 ft., has been extended 150 ft. to house the additional spindles which will raise the total spindleage of the local plant to 15,000. Two new warehouse compartments and 20 houses for operatives have also been constructed there. Work will start in the near future on enlargements at the company's mills at McKinney and Waco, Tex., where it is planned to install 5,000 and 2,500 new spindles, respectively.

Fact and Gossip

HUNTSVILLE, ALA. It is reported that the Chamber of Commerce has received assurances of the location of two big cotton mills and a bleachery in or near Huntsville within the next few months. Names of the proposed plants are not obtainable at this time nor is it possible to confirm the reports.

NEW LONDON, CONN. The Onondaga Textile Mills are in operation five and one half days per week.

BIDDEFORD, ME. Agent Howard R. Whitehead of the Pepperell Mfg. Co. has announced that as 90% of the workers at the plant are in favor of working during Labor Day week the fall vacation will be omitted.

*LOWELL, MASS. A hearing on the question of whom to appoint to serve as coreceiver with Charles F. Rowley for the Hamilton Mfg. Co. will be held at 10 a. m., Sept. 3, according to a notice recently sent to stockholders. Following the declination of Frederick A. Flather, treasurer of the Boott Mills, Lowell, to act as coreceiver, several unsuccessful conferences have been held over the appointment of some one to act in his stead.

NEW BEDFORD, MASS. The Beacon Mfg. Co. has resumed full time operations following a period of curtailment for many months.

THORNDIKE, MASS. The local property of the Thorndike Co., which suspended operations last year when the plant was consolidated with that at West Warren, Mass., is to be sold at public auction early in the fall. Samuel T. Freeman & Co., Philadelphia and Boston, will be in charge of the sale.

WEBSTER, MASS. Automatic stokers are to be installed in the power plant of the East Village mill of S. Slater & Sons, Inc., as part of the coal burning system that is to replace oil burners.

WEST WARREN, MASS. The Thorndike Co., which announced a shut down of the entire Warren division from Aug. 28 until Sept. 7 for vacations has cancelled the order and the plant operated as usual this week.

NEW YORK MILLS, N. Y. The New York Mills Corp. is now operating on full time day schedules with a normal working force.

UTICA, N. Y. A new company, to be known as Art Looms, Inc., has been formed by Rodney Wilcox Jones and John P. Liddy, president and treasurer, respectively, of the Augusta Knitting Corp., to take over the business of the Bowes Mfg. Co., of Utica. The new company will produce a fine line of drapery and upholstery fabrics, decorative bedspreads, etc., using the jacquard looms now installed in the Bowes plant.

CONCORD, N. C. The Locke Cotton Mills Co. resumed operations Aug. 30 after a week's shut down.

NEWBERRY, S. C. The Newberry Cotton Mills have resumed operations following a two weeks' shut down for the usual summer vacation.

WOOL

New Construction and Additions

*CHICAGO, ILL. The Olson Rug Co. has awarded a general contract to the Linquist Construction Co., Chicago, for the construction of the initial unit of its proposed mill at Crawford and Diversey Sts., to be five-story and basement, reinforced concrete and brick, with terra cotta trim, 156 x 270 ft., estimated to cost $400,000, with equipment. F. E. Davidson, 53 West Jackson Blvd., is architect.

CAMDEN, ME. The Maine Woolen Mills, Inc., a new company which is now in process of incorporation, has purchased the plant of the old Mt. Battie Mill and plans to begin operations soon. The Mt. Battie Mill is an eight set mill with 40 looms. It is said the new concern, headed by Arthur Bronstein of Brookline, Mass., will specialize in the manufacture of woolen cloth and blankets.

HOLYOKE, MASS. The Germania Mills are having plans prepared by McCormick & Craig, Springfield, Mass., for a new boiler house, to be one story, 50 x 60 ft., of concrete, brick and steel, and cost about $60,000. The new structure will house two new boilers with automatic stokers and full equipment.

MILLBURY, MASS. The Felters Co. is to enlarge its dyehouse to take care of increasing business.

UXBRIDGE, MASS. Work has been started on an addition to the dyehouse of the Davis & Brown Woolen Co., at the south end of the mill.

PORTLAND, ORE. It is reported that the Portland Woolen Mills have installed 20 new looms and two sets of cards.

*EAST GREENWICH, R. I. Work is progressing rapidly on the addition to the Greenwich Mills on Division St. Recent sub-contracts awarded are as follows: Plumbing, Henry J. Lyons Co., South Boston, Mass.; structural steel, John E. Cox, Fall River, Mass.; ornamental iron, Kilburn Lincoln Machine Co., Fall River; roof and sheet metal, Farber Roof & Sheet Metal Co., Pawtucket; paint, Fuller & Barker, New Bedford, Mass.; doors and finish, C. H. Borchers, Salem, N. H.

Fact and Gossip

SAN FRANCISCO, CAL. The Oregon City (Ore.) Mfg. Co., has announced plans for opening a retail store in San Francisco, as well as one in Seattle, Wash., both to open about Sept. 7. A. W. Parks is named manager of the Seattle store, and L. A. Stephenson will be in charge of the San Francisco shop.

MYSTIC, CONN. The Mystic Woolen Co. is operating its plant day and night, as it has been for years.

MYSTIC, CONN. The Mystic Worsted Mills have installed 40 warp stop motions. The mills are running full time, until 7:30 p. m., and are starting ten more looms, making a total of 40 to operate.

SOUTH COVENTRY, CONN. The Tracy-Elliott Mills, Inc., have been placed in temporary receivership with the appointment of Wilson D. Trueblood, of New York, as temporary receiver by Judge Dickenson of Connecticut, under bond of $25,000. The American Wool Stock Co., Inc., and Maurice Goldstein, of New York, petitioned the court for a receiver as creditors to the amount of $2,430. The Tracy-Elliott company is said to owe about $90,000, but is solvent with assets estimated at $625,000. The receivership is for four months and a hearing is set for Sept. 10 at Rockville.

SANFORD, ME. In the published list of taxpayers for Sanford and Springvale the Sanford Mills lead with $90,956.99; then comes the Goodall Worsted Co. with $72,888.86.

*BOSTON, MASS. Robert Gordon, receiver of the Old Colony Woolen Mills Co., has been authorized by Judge Hammond of the Superior Court to distribute to creditors an 82% dividend amounting to $107,720 out of total claims of $131,429. Mr. Gordon's final report and account has been accepted and approved, and he has been allowed $5,000 compensation for his services, and $7,500 for services of his counsel.

EAST DOUGLAS, MASS. The Hayward Woolen Co. and the Schuster Woolen Co. pay taxes of $10,848 and $9,971.85, respectively, this year.

MONSON, MASS. The Monson Associates, Inc., have abandoned business at the branch mill which was established in 1837 and is the oldest in town. N. F. Rourke was president and J. H. London general manager and superintendent. The mill is owned by the W. B. Dunn Co., Providence, R. I. The looms in the plant are being moved to Woonsocket, R. I. Mr. London expects to move part of the equipment to his State St. mill, the operation of which he is still undecided.

PITTSFIELD, MASS. The S. N. & C. Russell Mfg. Co. has shut down until Sept. 7 for vacations and repairs.

ROCHDALE, MASS. The Rochdale Mills of the American Woolen Co., which have been operating on full time for several weeks have started a night shift in the finishing department.

*PHILADELPHIA, PA. A charter has been issued to a company called Joseph D. Murphy, Inc., to manufacture, buy and deal in all textile materials, having a capital of $5,000. Jos. D. Murphy and M. A. Murray were mentioned in the application. This is an incorporation of the business formerly operated by Jos. D. Murphy at 30th & Reed Sts., where woolen and worsteds goods were manufactured and yarns spun. The newly incorporated company has recently moved to Wister Station, Germantown, where business is being continued along the same lines.

LENNI MILLS, PA. Arthur Brown & Sons, has been chartered with a nominal capital of $6,000, to operate the plant recently acquired from Geo. Brown's Sons, Inc., at Lenni Mills, on the production of Saxonies, etc. E. L. Brown, Media, Pa., is treasurer of the new company.

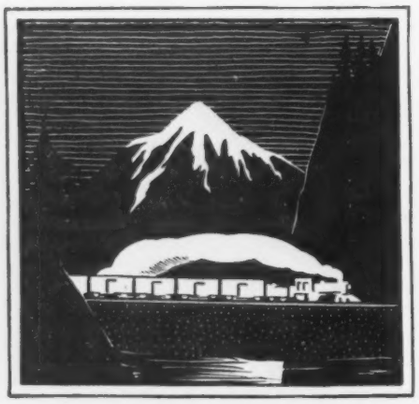
WOONSOCKET, R. I. The Glenbrook Worsted Mills have made a voluntary assignment for the benefit of creditors. A document filed at the City Hall names Otto C. J. Haufe, secretary of the company, as assignee. Liabilities are said to be in excess of assets. The mills are running on a practically full time schedule.

LEBANON, TENN. The Lebanon Woolen Mills, which have been curtailing operations for several months, are now running full time, both night and day.

SEATTLE, WASH. The industrial development committee of the Seattle

*Indicates previous mention of project.

"30 carloads have left for *the EAST*"



A FIRM of Columbus, Ohio, commission merchants purchases from growers over a wide area and distributes all the way to the Atlantic. All buying is done from Columbus; all shipments are consigned to that point. As the cars are started, Columbus is informed of the car numbers, weight, size, class and price of the fruit. Then, from Columbus, by long distance calls, the products are sold in the various market cities—and the cars diverted and re-routed, also by telephone!

AT TIMES 30 carloads of melons will leave Colorado or California for the East—and be sold and re-routed by telephone while rolling. Thousands of businesses are finding that the telephone brings a development that would be impossible by any other means. Territories are covered that the salesmen, traveling in person, could not reach. Buying and selling costs are kept low that otherwise would become prohibitive. A degree of speed is reached in selling and distribution that otherwise would be unattainable. Wherever it is desirable to increase business activity and lessen the cost, there long distance calls have a place.

Is there a possibility that the telephone might be used still more effectively in your business? Have you lately taken stock of the value to your business of a communication system that embraces 17,000,000 telephones and reaches 70,000 towns? How many expensive trips each month might be saved? How much valuable time out of the office might be saved by occasional minutes over the long distance lines? Who is there important enough to see who cannot be reached by Long Distance?

Ask our Commercial Department in your city to help you take an inventory of the various ways Long Distance can develop your business. Such a study and report will gladly be made free. And why not make, now, that call that may pay for itself many times over? Distance is no obstacle. Tell us whom you would like to talk with, now. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

Mill News—Continued

Chamber of Commerce has started a series of surveys of the Pacific Northwest in order that there be made a compilation of all information required by the various industries which may in the future seek locations in that section. The first survey is to include all lines which might be drawn upon by a woolen manufacturing plant.

TORONTO, ONT., CANADA. The Canadian Wool Co., Ltd., recently purchased a building having nearly 28,000 sq. ft. of floor space, at the corner of Church st. and the Esplanade, Toronto, for storage purposes.

KNIT

New Construction and Additions

*FONDA, N. Y. The new picking room addition to the plant of the Fonda Glove Lining Co., is ready for operation.

*PHILADELPHIA, PA. The Olympia Full Fashioned Silk Hosiery Co., recently organized, has awarded a general contract to William F. Lotz, 4644 Frankford Ave., for its proposed mill at Vernango and Weikel Sts., to be two stories high 45 x 100 ft., brick and steel frame. Joseph Cichincy, Inc., 743 Corinthian Ave., is architect and engineer.

READING, PA. It is reported Busy Bee Hosiery Co., Inc., manufacturers of full fashioned hosiery, are increasing equipment by the addition of 12 full fashioned machines, bringing their total to 20.

*KNOXVILLE, TENN. The Standard Knitting Mills have awarded contract to A. R. McMurray, local contractor, for erection of a new warehouse, two stories and basement, reinforced concrete, 198 x 96 ft., with steel frame windows. A 213-ft. runway will connect the main plant with the warehouse.

*HAMILTON, ONT., CANADA. The recently completed warehouse of the Mercury Mills, Ltd., is a four-story structure, 82 x 75 ft. Equipment of the Mercury plant has been increased by the installation of 38 additional knitting machines, four loopers and two sewing machines.

Fact and Gossip

PEORIA, ILL. The Stern Knitting Mills, Inc., have been organized with capital of $150,000, and headquarters at 1026-8 East Adams St., Peoria, to operate a local mill. The company is headed by Jacob L. Stern, Ralph Buchele, and Jack Livingston, all of Peoria.

PLEASANTVILLE, N. J. A charter of incorporation has been granted to the Starr Knitting Mills, Inc., to have a capital of $100,000. Incorporators mentioned were Jesse W. Starr, Lawrence H. Starr and Blanche L. Starr. This is an incorporation of the business of the Starr Knitting Mills, Inc., located at Oxford Ave. and Griscom St., Germantown, Philadelphia. The company, as has been previously announced, is erecting a new plant here and will move their machinery from Philadelphia, which mill will be discontinued after removal to Pleasantville. Manufacture of hosiery will be continued.

*RUNWAY, N. J. The reorganization plan submitted by the Milbury Atlantic Mfg. Co., has been ratified by Judge Mack in the U. S. District Court. It provides for the immediate payment of 45% of the claims, which aggregate $69,814, in cash, and 5% monthly until the remainder of the indebtedness is liquidated. The business is to be taken over and operated by a new corporation to be managed by an advisory committee consisting of three members, two of whom are to be selected by the creditors. Alceste R. Milbury, head of the old company and owner of 95% of its capital stock, is to head the new company.

BROOKLYN, N. Y. The two-story building at 1330 Fulton St., occupied by the Pyramid Knitting Mills, Inc., was considerably damaged by fire on Aug. 29.

COHOES, N. Y. The Steadfast Mill of the Roff Knitting Mills, Inc., has resumed night operations after a curtailment.

SALISBURY, N. C. The Nancy Hosiery Mills, Inc. are out of business.

SILK

New Construction and Additions

HERMOSA BEACH, CAL. It is reported the Golden State Silk Mills have received a shipment of new looms capable of raising the daily production of the plant from 1,600 to 3,600 yds.

NEW LONDON, CONN. The Corticelli Silk Co. has just completed the installation of 150 new looms in Mill No. 5, and has awarded contract to Oliver Woodwarth Co., New London, for a new roof for its Mill No. 3, in which the dyeing for all Corticelli mills in the vicinity of New London is done. New machinery for skein dyeing was recently installed in the latter plant under the direction of A. W. Buhlmann, textile engineer, New York.

*PUTNAM, CONN. Considerable expansion in the Putnam mill of the Edward Bloom Co. has become evident during the last few weeks. The company has already installed 50% more machines than were at the plant when purchased. A full force with day and night shift is at work.

STONINGTON, CONN. The American Velvet Co. has just finished installing 26 new looms.

PATERSON, N. J. The Kahn Textile Co., 99-101 Cliff St., a co-partnership formed by Max, Harry, Nathan, Jacob and Meyer Kahn, has an equipment of 38 looms for the manufacture of broad silks. Product is sold direct.

*PATERSON, N. J. The Neptune Silk Co., Inc., incorporated last summer with a capital of $100,000, operates 28 looms on broad silk production at 447 Grand St. Philip Orbach is president, and S. Nathans, treasurer.

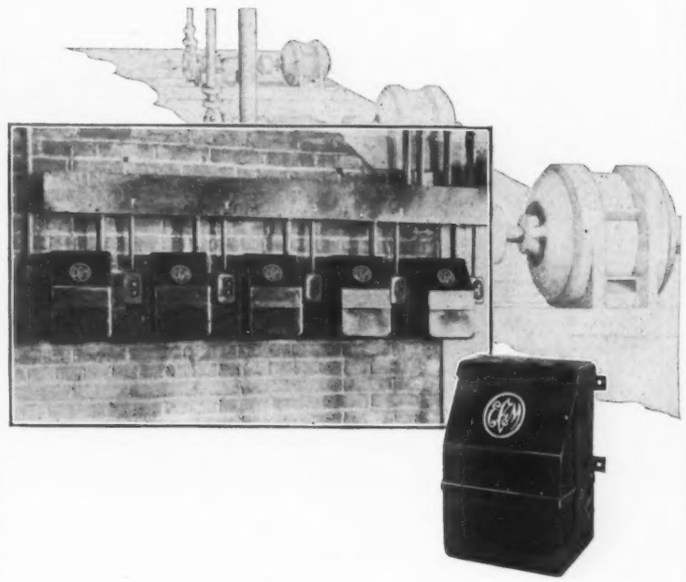
PATERSON, N. J. B. Siegel & Son, 58 Railroad Ave., manufacture broad silks, having an equipment of one warper, two winders, one quiller and 16 box looms.

*MACUNGIE, PA. The Macungie Silk Co. is now occupying a new addition, recently completed, for broad silk manufacture and is planning still further expansion.

SHAMOKIN, PA. C. K. Eagle & Co., Inc. have approved plans for a new one-

*Indicates previous mention of project.

Starting and Protecting A. C. Motors



Place your AC motors under push-button control by installing EC&M Type ZO Switches.

Type ZO Switches are built for across-the-line starting of squirrel cage motors up to 10 HP. When these switches are in service, your operators have only to press a push button to start or stop their machines.

Type ZO Switches have their contacts immersed in oil so they can be safely used in corrosive atmospheres and where inflammable dusts and gases are present.

In case of overloads, lost phase or other abnormal conditions, your motors are completely protected without any blowing of fuses and costly delays. This protection is provided by an expansion wire trip which is 100% accurate and dependable.

It is not necessary to mount the ZO Switch so that it is accessible to the machine operator. After the overload trip has opened the motor power circuit, the operator has only to wait a few seconds and then press his starting button to again put his machine in operation. He has complete control from his push button.

Write for Bulletin 1048.

THE ELECTRIC CONTROLLER & MFG. CO.
CLEVELAND, OHIO
BIRMINGHAM - BROWN-MARX BLDG
CHICAGO - CONWAY BLDG
CINCINNATI - FIRST NATIONAL BANK BLDG
DETROIT - DIME BANK BLDG
NEW YORK - 50 CHURCH ST
LOS ANGELES - THOMAS MACHINERY CO. AMERICAN BANK BLDG
PHILADELPHIA - WITHERSPOON BLDG
PITTSBURGH - OLIVER BLDG
SAN FRANCISCO - CALL BUILDING
SEATTLE - 570 COLMAN BLDG
TORONTO - TRADERS BANK BLDG

"THE BROADBENT"

HYDRO-EXTRACTORS

Suspended Direct Electrically-Driven Hydro-Extractor Type No. 4

THESE MACHINES ARE UNQUESTIONABLY THE MOST SOLID AND SUBSTANTIALLY CONSTRUCTED EXTRACTORS ON THE MARKET

It is not possible to find a more satisfactory machine.

Extract from recent letter:

"The last Hydro-Extractor we bought from you (1925) run by electricity has been so satisfactory that we were wondering if it would be possible to change our two steam driven extractors to motor driven extractors. . . . . We find that we have two of these machines steam driven which we would like to change to electric drive."

Old Broadbent Steam driven extractors can be converted to an electric under drive identical with the machine illustrated at a great saving. Write for particulars.

T. V. COTTER & SONS Sole Agents in U. S. A. **179 Lincoln St., Boston, Mass.**

Southern Representative: JOHN HILL, Healey Bldg., Atlanta, Ga.

LANE
CANVAS BASKETS

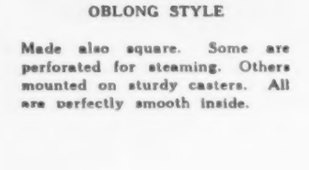


FIG.20.

OBLONG STYLE

Made also square. Some are perforated for steaming. Others mounted on sturdy casters. All are perfectly smooth inside.

Have established an enviable reputation among mill men for economical and uniformly satisfactory performance.

Standard for 30 years

FIG.22

ROUND STYLE

All Lane baskets built on spring steel frame with flexible eye joints. The yielding quality of this construction prevents bending or breaking.

Write for Catalog No. 90.

W. T. LANE & BROS. — Manufacturers — POUGHKEEPSIE, N.Y.

Mill News—Continued

story addition, brick, steel and concrete, on which construction will begin at once. It will be equipped primarily for dyeing service.

*BUENA VISTA, VA. The Buena Vista Textile Corp., recently noted incorporated with capital of $10,000, will start the manufacture of broad silks at once in the plant formerly operated by the Buena Vista Throwing Co., which it has leased. The new company, of which Charles H. Huber is president and Harry Kaplan, treasurer, has an equipment of 52 looms and four warpers for initial operations.

Fact and Gossip

*PATERSON, N. J. Following a composition settlement for the Frobac Silk Co., with understanding that assets were to be turned back to company, August A. Fischer, receiver, has been ordered to appear in the Federal District Court at Newark, Sept. 7, to explain why the goods and chattels have not been returned. The court action follows a complaint of Walter F. Backalan, secretary and treasurer of the company.

*ALBURTIS, PA. A report filed in the U. S. District Court, Philadelphia, by Harry Boreth, receiver in equity, shows that the affairs of the Mapele Silk Mills, of Alburtis, have been wound up, its assets liquidated, its debts paid, and a small balance turned over to the receivers of the Mapele Silk Mfg. Co., the parent organization. Judge Dickinson has confirmed the receiver's account and directed that he be discharged, and his surety relieved of further liability.

RAYON

New Construction and Additions

*NEW CASTLE, DEL. The Delaware Rayon Co. has work in progress on assembling equipment for the first unit of its proposed local mill, on site of the former plant of the Bethlehem Steel Co., and expects to begin production within the next two to three weeks. The plant will consist of seven units in all, and is slated for completion late in the fall of next year. It is expected to give employment to more than 500 operatives during the next 12 months.

Fact and Gossip

CHESTER, PA. Fire of undetermined origin started in plant of Samuel A. Wood Co., rayon tops, noils, etc., on Aug. 25, causing about $40,000 damage to this and several other plants in the vicinity. Oliver North's, 14th & Crosby Sts., garnetter of worsted and woolen waste, plant was damaged as well as the J. K. Lamb Machinery Co. Plant of Samuel A. Wood Co. was damaged to the extent of $25,000 according to estimates, the Oliver North mill at $8,000 and the machinery company about $5,000.

DYE, BLEACH AND FINISH

New Construction and Additions

PHILADELPHIA, PA. Application for a charter of incorporation of a company to be called Perfection Hosiery Dyeing & Finishing Co., will be made Sept. 10, to engage in a dyeing, finishing and printing business. Application is being made by Ember, Outterson & Fuges, solicitors. This will be a continuation of the business that has been carried on under the name Perfection Finishing Works, at the N. E. corner of Hunting Park Ave. & Marshall St., dyeing and finishing all kinds of hosiery. This plant had a capacity of 500 dozen daily. After charter has been received the new name, Perfection Hosiery Dyeing & Finishing Co., will be used and the previous name discontinued. Officers of the new corporation will be announced in the near future. The company will move early in September to 3819 Frankford Ave., where larger and more modern facilities are available, having outgrown the quarters at Hunting Park & Marshall St.

*ROYERSFORD, PA. A charter has been granted to a company called Roth & Greer, Inc., having a capital of $20,000, to bleach, dye, mercerize, wind and nap piece goods. This company, as previously announced in these columns, has already started work on equipping the Mingo property here and making alterations in it for their purpose.

Fact and Gossip

PATERSON, N. J. The Monitor Piece Dyeing & Finishing Co., recently formed with a capital of $125,000, to operate a local plant, will be represented by Joseph Carroll, 141 West Broadway, Paterson, one of the incorporators. The other incorporators are Joseph V. Pumagalli and I. Tomai.

ARCADIA, R. I. Chester L. Eddy, of Cranston, R. I., has been appointed permanent receiver of the Nutex Mills, Inc., under bond of $5,000. Mr. Eddy, who has been acting as temporary receiver since Aug. 11, in his preliminary report to the court, recommended the sale of the mill as a going concern, and the court appointed John H. Williams and Herbert Low appraisers of machinery of the mill, and E. Tudor Gross as appraiser of the real estate.

MISCELLANEOUS

New Construction and Additions

SAN FRANCISCO, CAL. The Tubbs Cordage Co. has given out a group of miscellaneous awards for the completion of its proposed one-story storage and distributing building at 22d & Iowa Sts., including sheet metal work to the Capitol Art Metal Co.; roofing, Malott & Peterson, and steel rolling doors, Kennerson Mfg. Co., all of San Francisco. The general contract was recently let to the P. J. Walker Co., Sharon Bldg.

*VANCOUVER, WASH. Reorganization of the Washington-Oregon Linen Mills Co. has been perfected, articles of incorporation having been filed Aug. 23 at Olympia. The company will have a capital stock of $400,000. The machinery which was shipped to Vancouver for the old company, and which has been stored there, will be used by the new company which now takes it over. A building which has been vacated by the Multnomak Truck Co., is to be used for the mill. The board of directors consists of I. Sidney Starling, W. B. Dubois, J. B. Atkinson, C. E. McCall, John Wilkinson, Lewis Shattuck, Earl Carson and W. J. Higgins. Vancouver, and Fletcher Linn, of Portland.

*Indicates previous mention of project.

EXPERIENCED radio listeners know where to tune in for good results

Just as experienced needle users are certain of the identity of good latch needles

Torrington, of course!

The red box with the green label

The TORRINGTON COMPANY
Torrington, Conn., U. S. A.

BRANCHES:

THE TORRINGTON COMPANY, CHERRY AND JUNIPER STS., PHILADELPHIA
C. B. BARKER & CO., LTD., 140-144 W. 22ND STREET, NEW YORK
LOS FABRICANTES UNIDOS, 964 CALLE BELGRANO, BUENOS AIRES

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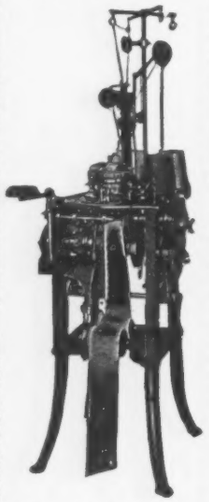
See also CONSOLIDATED TEXTILE CATALOG

NEEDLES and MACHINES
OF
RECOGNIZED
QUALITY and WORTH

Acme A



Revolving Cams

are the

ACME PRODUCTS made for **SERVICE** in the **KNITTING ROOM**

Ask those who use them

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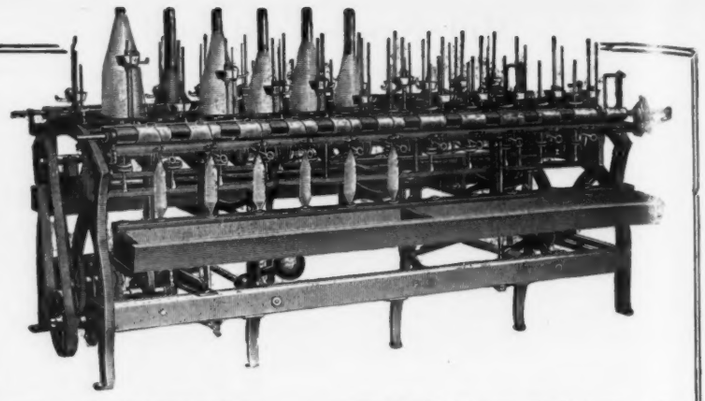
Acme D

Revolving Needles

Acme Knitting Machine and Needle Co., Franklin, N. H.



PAYNE WINDERS

Wind from Cop, Skein or Bobbin

Over 1,900 in use by Hosiery Manufacturers

IMPROVED UPRIGHT SPOOLERS

To Spool from Cop, Skein or Bobbin; Doubling Spoolers for Doubling two, three or more ends into one; Upright Quillers, Quill from Cop, Skein or Bobbin. Ring Dresser, Spooler and Reel Spindles, Cop Skewers, Spooler Guides, Bolsters and Steps Made and Repaired at Short Notice.

GEO. W. PAYNE CO., Office, 102 Broad St., PAWTUCKET, R. I.

(Est. 1865, Inc. 1903)

CHARLES W. PAYNE, Pres. CLINTON F. PAYNE, Sec'y and Treas.

Established 1870 Incorporated 1890

Get Repeat Orders by Using

Crane Spring and Latch Needle Knitting Machinery

SOME CRANE FEATURES

Patent removable hardened Wing Burr Wheels.

Patent Thread Stop Motion can be fitted to 20 in. and 32 in. frames and are specially adapted for making fine Jersey Cloth and Stockinet.

Our flat machine is adapted for knitting collarettes.

SPRING NEEDLE UNDERWEAR MACHINE WITH AUTOMATIC TAKE-UP

This machine is made in sizes from 13" to 26" in diameter of any desired gauge, the number of feeds depending on the size of cylinders. Also built in sizes from 2½" to 32" in diameter for the production of a great variety of fabrics.

Aside from the feeds for plain fabrics, the stockinet, elderdown and astrachan feeds are superior to any on the market.

IMPROVED AUTOMATIC COLORED PLAIN STRIPER

Made in sizes from 7⅝" to 20⅝" inclusive, of any desired gauge; these measurements being back to back of cylinder needles.

The fabrics from this machine are used for bathing suits, theatricals and athletic goods.

These machines are second to none on the market.

The Crawford stop-motion is applied when requested.

"It Pays to Use Good Machines and the Best Are None Too Good."—Our Motto

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CRANE MANUFACTURING CO., Lakeport, N. H.

CHARLES COOPER'S
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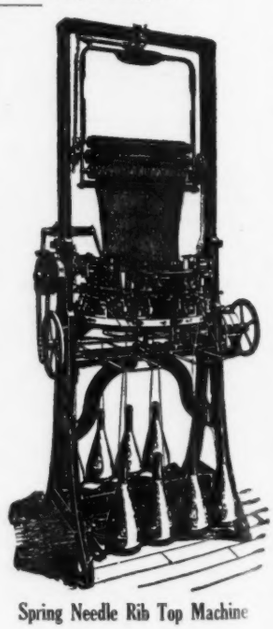
Spring and Latch Needle KNITTING MACHINERY

STANDARD FOR

PLAIN RIBBED, CIRCULAR AND FLAT UNDERWEAR
SHIRT CUFFS
DRAWER BOTTOMS

Rib Cuff Cutting Machines
Burr Wheels and Burr Blades
Balmoral Collarette Machines
Automatic Rib Cutting and Folding Machines

SPRING AND LATCH NEEDLES



Spring Needle Rib Top Machine

Agents—Mellor, Bromley & Co., Ltd., Leicester, Eng.

Sole Agents for China—Elbrook, Inc., 51 Kiangse Road, Shanghai, China

KNIT GOODS

July Underwear Production

The following table shows July knit underwear production as reported by the Department of Commerce summarizing reports from 152 mills, 18 of which were idle. Stock at end of month is reported by 65 mills:

Men's	Union suits	Shirts	Drawers
Winter	180,448	52,782	59,587
Summer	47,356	44,104	21,664
Total	227,804	96,886	72,250
Stock, end of month	350,169	138,853	138,857
Women's—			
Winter	47,302	23,637	17,038
Summer	33,489	83,327	13,996
Total	80,791	106,964	31,034
Stock, end of month	137,387	93,302	69,440
Boys'—			
Winter	65,139	1,050	674
Summer	2,289	659	10
Total	67,428	1,709	684
Stock, end of month	145,854	10,728	7,127

Comparison of conditions in the previous month is shown in the following table:

Orders and shipments (150 identical establishments—all classes):*	July, 1926	June, 1926
New orders received during month, less cancellations.	582,079	926,718
Shipments during month...	874,175	877,883
Unfilled orders end of month	2,099,325	2,391,486
Orders and shipments (100 identical establishments—cotton):		
New orders received during month, less cancellations	370,515	634,660
Shipments during month...	617,264	617,859
Unfilled orders end of month	1,629,761	1,876,575

*Includes 100 identical establishments manufacturing cotton knit underwear.

Bids on Army Socks

PHILADELPHIA, PA.—Bids on cotton and woolen stockings were opened Aug. 30 at the local office of the army quartermaster. Bids included 176,357 pairs light weights woolen stockings, Lynchburg Hosiery Mills, 23.85c per pair net, delivery starts in thirty days, complete in seven months. Ellis Hosiery Co., 23.41c on one-half entire quantity, 23.83c on balance, or 23.58c on total net, delivery 45,000 pairs monthly, beginning October, complete January, 1927. Batavia Mills, 24.43c, terms 1-10 or ½-20, delivery starts in 34 days at rate of 15,000 pairs weekly. E. B. Sudbury & Co., New York, on two samples, 27.5c and 24.98c, terms net in first case with delivery of 24,000 pairs monthly, terms one ten in the second, delivery of 20,000 pairs monthly. Union Mfg. Co., Union Point, Ga., 24¼c, 24⅜c, 24½c, 24⅝c, 24¾c and 24 99-100c on six successive lots, 24,000 pairs each, and 24⅞c on remaining 32,357 pairs net, delivery to begin Oct. 1 to 15, 24,000 pairs every ten days.

Three hundred and four thousand sixty-one pairs unbleached cotton stockings. Batavia Mills, 9.83c per pair, terms 1-10 or ½-20, delivery commencing in 24 days at rate of 24,000 pairs weekly. Ellis Hosiery Co., Philadelphia, 10.4c on three quar- 11, two mportant technical meetings 50,000 pairs monthly until complete. Lynchburg (Va.) Mills, 10.9c net, delivery starts in 30 days, complete in 10 months.

A Woman's Standardized Sweater

Suggestion for Elimination of Large Number of Styles and Concentration on Few Types

SELLING agents for women's sweaters agree that conditions in this division of the trade are not all that can be desired and naturally under such circumstances many are casting around to find the reason for such conditions. The opinion has been recently expressed in more than one quarter that the principal difficulty manufacturers and their representatives confront is the multiplicity of styles which are on the market and on which increasing competition makes it difficult to merchandise.

Why Not Unite on Types?

The thought is entertained by certain leading authorities handling this line of merchandise that if the leaders in the trade could get together and decide on a type or style of garment which they felt would be desirable to urge the trade as the proper thing to buy, much of the difficulty which now exists would be eliminated. It is explained by proponents of this proposition that today the buyer comes into the market in an endeavor to find out what he should buy and the multiplicity of styles is so great that he becomes confused and cannot decide on any one thing as a leader in this line. He will go to a certain selling agent and will be informed that a certain make of sweater is the only thing that will be good. The next seller he meets gives him an equally strong argument on something entirely different. By the time he has canvassed the selling market he has had presented to him a dozen to fifteen styles of women's sweaters, with practically the same argument as to their desirability and salability from all the representatives he has met.

Can Style Be Directed?

Style is a peculiar thing. Like the wind, "It bloweth where it listeth. Thou hearest the sound thereof but canst not tell whence it cometh nor whither it goeth." It is true that the origin of style for any particular type of merchandise or wearing apparel is difficult to trace. Nevertheless it is pointed out intelligent propaganda can develop demand and in a sense make style. In the case in point, such propaganda would not be for the purpose of converting the buyer, whether jobber, retailer or ultimate consumer, from one class of merchandise to something entirely different, such as an effort to induce the women of this country to wear woolens instead of silks. It is simply in the nature of simplification that selling agents are thinking of the possibility of united action in this particular. In the final analysis the buyer has to buy what is offered him. If a standardized type of sweater is all the buyer can find, this type with certain modifications, according to the skill and artistic sense of the originator, will be the garment that is taken by the wholesale buyer and distributed to the customer.

A Matter of Psychology

As a prominent seller in the sweater field said the other day —"If a buyer comes into my place and I tell him that a woman's buttoned sweater with belt is the thing for the coming season, he may listen and be more or less moderately interested but he goes out with his mind far from made up that I know what I am talking about. Let him go to three or four competitors of mine and have them tell him the same story, especially if they are leaders in the business, and he will come pretty near believing that the woman's buttoned sweater with belt is the only thing he can buy. It does not seem to me that it would be very difficult for the majority of the trade to get together and determine on what they will have their mills make and push this type, or perhaps types to the buyer. You can call it propaganda or anything else that you please but it sounds like good sense to me.

"There certainly is a lot of waste time, energy and expense in getting up the various lines of sweaters that are shown in the wholesale market. Isn't it economic to eliminate this waste? It would not be a matter of controlling prices or restraint of trade in any way. Each individual seller would put his own personality into instructions to his manufacturer as to the coloring, finishing, etc., of the garment that he wanted the producer to turn out. I honestly believe that we would be doing the buyer a service if we were to eliminate the element of uncertainty that exists in his mind today and incidentally we would be able to profit thereby because of the probable volume business that would be placed on the standardized type or types instead of the retail orders comprising a dozen or fifteen styles of goods. It is my hope that selling agents can see the advantages to such a proposition as I visualize and that it will be possible for us to get together and arrange some plan of operations that will be mutually beneficial."

PATERSON, N. J. The Royal Piece Dye Works are reported to be planning additions at their mills to be used primarily for tin-weighted fabric production. The company has recently completed an enlargement at the plant.

Hosiery Call Shows Fairly Steady Gains

Buyers Make No Impression on Firm Market for Fall—Little Done for Spring

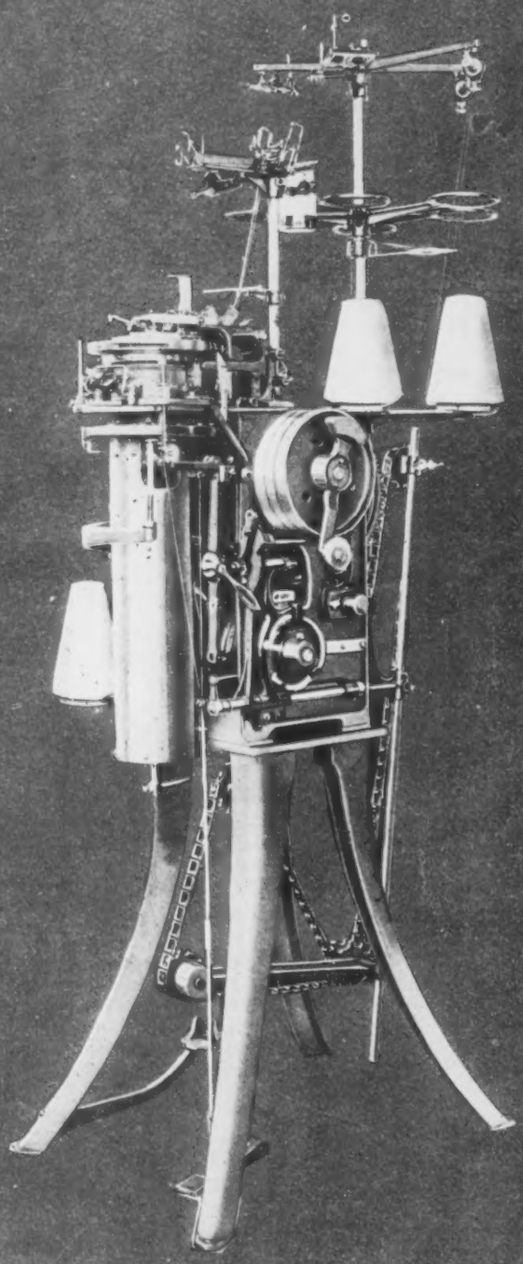
A visible improvement in demand for hosiery is noted throughout the market. An even more general request is expected after Labor Day for buyers are not here in large numbers and those who are in town are requesting merchandise for prompt delivery. It is apparent that a good many buyers have waited so long that they are not likely to get the shipments they are requesting. The raw material situation, with its evident tendency toward higher prices rather than lower is creating an atmosphere of firmness that buyers seem unlikely to disturb. It is believed that anything which is at all desirable will continue to command firm quotations and in certain cases it is anticipated that increases may be secured.

Silk Hosiery Steady

The upward trend of the raw silk market entrenches manufacturers in their attitude of firmness. While the leading full fashioned concerns are not likely to make any announcement as to new prices much before the middle of October, everything points to at least a maintenance of present values, if not higher ranges when goods for another season are put out. On seamless goods there is a similar attitude of strength induced by the same conditions in raw material. The increase in the price of mercerized yarn, which has jumped anywhere from 3 to 6 cents a pound within the last few weeks, is thought likely to produce a corresponding increase in prices of mercerized goods. These at present are firm and in a fairly good statistical position.

Children's Goods Spotty

On certain lines of children's goods a very fair business has been done but for next spring buyers are hesitant and do not seem to know exactly what they want. Last year the demand for plain legs with fancy tops exceeded in many instances the capacity of mills to supply them. At the moment these seem to be a drug on the market and buyers claim they will want fancy patterns with all sorts of wild notions as to the character of these patterns. Just at the moment there is apparently an increasing demand for full length staple ribbed goods. One selling agent reports that he has had to put an extra mill on these lines and finds it difficult to keep up with deliveries. This same agent complains that on ⅞ goods he cannot secure an offer that means the manufacturer will get out whole and his



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WILDMAN MANUFACTURING COMPANY
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We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

WILDMAN
SPRING NEEDLE KNITTER

Knit Goods—Continued

only hope in marketing an accumulation is to find someone who will stage a sale at a price that will make it possible to move this merchandise. On infants' goods bulk business has been placed with certain of the large operators but it is anticipated that the general trade will be more keen to operate after Labor Day.

Rayon Goods Better

A distinct improvement in demand for women's rayon goods has been noted during the last week or two. Certain lines are well conditioned and buyers are asking for deliveries that are impossible to comply with. The prices seem well stabilized and the outlook is for a maintenance of quotations throughout the season.

Hosiery Comment

An agent handling lines of 7/8 goods stated this week that on merchandise he could sell freely last year at $3.25 it was impossible to get an offer of $1.75. These goods were plain legs and fancy top. Buyers indicate that they are not going to want this class of merchandise, although there is no positive assurance that before the season is over there will not be a reversion in favor of meritorious lines.

* * *

In full fashioned, the demand is almost entirely for light-weight chiffons. There is said to be a stock of heavy goods with short boots simply because the buyer is taking little or no interest in this class of merchandise.

* * *

Speaking of fancies, a hosiery agent the other day made the prophecy that they would last for another year at least, but he also contended that eventually they would go out of style and that when they did he foresaw the possibility of price cutting on staples that would be more severe. The fancy is a precarious article, this man contended, because of the demand by the buyer for something new all the time. It must be the manufacturers' continuous effort to prevent an accumulation of styles and patterns that soon become old.

* * *

There may be arguments pro and con as to the advantage of branded hosiery but examples are to be found of manufacturers who have built up a reputation on a particular brand and who are able to keep their mills running full while competitors, in the same locality even, who have not fortified themselves with a request which continually reaches them from the ultimate consumer back through the various channels of distribution, are operating in a negligent fashion.

* * *

The question was asked the other day why it was that hosiery mills had such a comparatively short existence. The statement of a statistical agency that the average life of a hosiery mill in this country was ten years was cited as an evidence that there was something wrong with the industry. An explanation given by a prominent selling agent was that it was too easy for a man contemplating the manufacture of hosiery to go into business and also that considering the price of his equipment he did not get a commensurate product compared, for instance, with the needle industry.

* * *

Speaking of mortality in the hosiery business, it may be of interest to state that according to a comparison between a knit goods directory published in 1904 and a similar one in 1925, out of 512 hosiery mills in existence in the former year, only 146 were still running in 1925 and of the latter only 124 were operating under the original title.

* * *

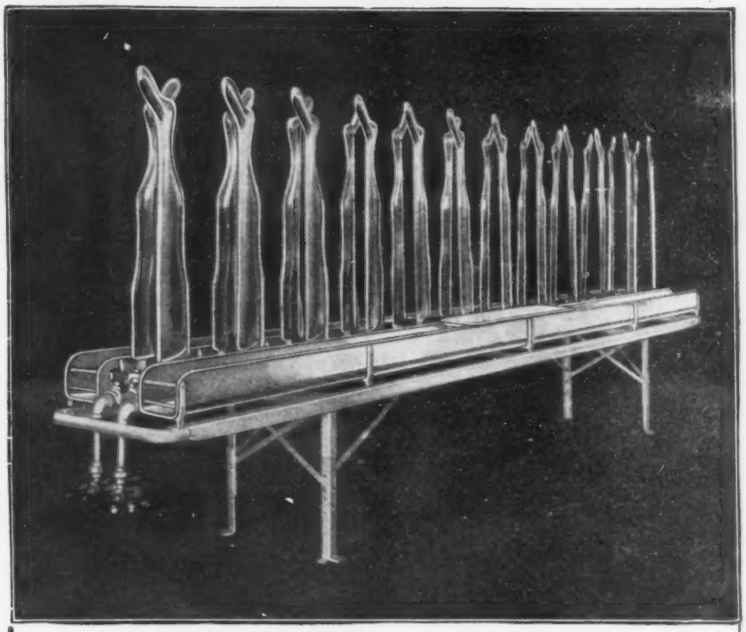
Lawrence & Co. are showing a ladies' silk hose No. 875, made by the Ipswich Mills. This is silk to the top and plaited over what is termed a "Witch" yarn. The composition of this yarn is a trade secret but the resultant article has met with such approval by the trade that it has been necessary to increase its production twice and it is still developing enlarged demand. The line is shown in 27 shades and is being featured in advertising in consumer and trade magazines.

German Hosiery and Glove Exports to U. S.

Declared exports of hosiery and gloves from the Dresden consular district to the United States during the first half of 1926 were valued at $3,718,010 compared with $2,466,938 during the first six months of 1925, says Vice Consul Durward Grinstead, Dresden, Germany, in a report made public by the Department of Commerce. Cotton gloves accounted for $2,826,749 during the first half of the current year, wool gloves for $89,869, cotton hosiery for $711,523, and wool hosiery for $89,869. Wool gloves and cotton hosiery showed a decline in value as compared with the like period of the previous year, although cotton hosiery showed a small increase in quantity.

R. W. Jones Buys Drapery Mill

Art Looms, Inc. is the name of a new corporation established at Utica, N. Y., by Rodney Wilcox Jones, president of the Augusta Knitting Corp., Utica, and John P. Leddy, treasurer of the same mill. This corporation will take over the plant of the Bowes Mfg. Co., Utica, which has been operating about 85 looms on rayon filled draperies and art cloths. Under the new management the mill will produce a line of art fabrics, including draperies, upholsteries, bedspreads, etc. The Augusta Knitting Co. is a large producer of rayon goods to-day and the experience of the new owners in this class of goods will stand them in good stead in the new enterprise.



Paramount Progress

The increasing number of Paramount Users establishes more firmly than ever before, the Superiority and Efficiency of the PARAMOUNT METHOD for correct hosiery drying and finishing. One of the important factors in determining Paramount Supremacy is the constant improvement of Paramount Equipment to more effectively fill the requirements of discriminating hosiery manufacturers.

We are now in a position to furnish on either a sale or rental basis, the NEW PARAMOUNT ALL-METAL TABLE with ANGLE-BASE ATTACHMENTS, plus an improved and different principle in Low Pressure Steam operation.

This NEW TABLE is made entirely of metal and the troughs are constructed from smooth, highly-polished aluminum. Aluminum is non-absorbent and tarnish-proof, which permits changing from colored to bleached goods by simply wiping out the troughs. All edges are rounded and there are no corners or pockets to collect dirt. The possibility of THREAD PULLING is positively eliminated.

The ANGLE-BASE ATTACHMENT allows the operative to see both sides of the stocking without moving the form. It facilitates and simplifies both boarding and stripping and promotes Quality Work.

The new Circulating System provides for uniform heating at all times, with unusually low steam pressure.

Upon request, we will be pleased to furnish further particulars.

PARAMOUNT TEXTILE MACHINERY CO.

See Also CONSOLIDATED TEXTILE CATALOG

Hunter Building

Market and Madison Streets, Chicago, Ill.

NEW AND NOVEL DESIGNS KNITTED THROUGHOUT WITH "BANNER" DIAGONAL MACHINES

THESE patterns are not printed on the outside; they are actually knit into the fabric by our patented reversed plaiting method, as shown by the illustration.

Patterns like the above and many others are easily made by our "Banner" Diagonal Stripe machine equipped with Horizontal and Vertical attachments.

See also CONSOLIDATED TEXTILE CATALOG

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Philadelphia Sales and Show Rooms
Colonial Trust Bldg., 13th and Market Sts.

To Discontinue Hosiery Dept.

Clift & Goodrich, knit goods commission house, New York City, announce the discontinuance of their hosiery department as of Dec. 1. The Ballston Knitting Mills, manufacturers of wool hosiery, Ballston Spa. N. Y., which have sold through this house, will hereafter sell direct, with offices at room 906, 93 Worth St. The hosiery force of Clift & Goodrich in practically its entirety will represent the mill at the new address. All orders taken through Clift & Goodrich for the Ballston Mills will be invoiced by the commission house, while new orders and reorders after Dec. 1 will be invoiced by the mill direct. G. S. Macauley, formerly with Clift & Goodrich, is the manager of the Ballston Knitting Mills' new office.

Burson Agent Resigns

C. Courtney Keller, for many years connected with the Burson Kniting Co. as sales manager, has tendered his resignation. Mr. Keller will shortly become a member of the firm of Jacob & Schey, 93 Worth Street, New York City. This firm will continue to represent the well known lines of the Chester Knitting Mills, J. H. Rickman Knitting Mills, Lynchburg Hosiery Mills, Crown Hosiery Mills, Vance Knitting Mills, Waldensian Hosiery Mills, Drexal Knitting Co., Gault Mfg. Co., Bell Hosiery Mills and others, manufacturing lines of men's, women's and children's hosiery of various grades.

Herman Heller to Open Office

Herman Heller, in charge of the sweater department of Clift & Goodrich, will resign in the near future and open an office in Room 591, 93 Worth Street, New York.

Obituary

Elijah P. Smith

Elijah P. Smith, former head of the cotton goods commission house of Woodward, Baldwin & Co. and one of the most prominent merchants in the Worth Street district, died Tuesday at the New York Hospital of pneumonia, following an operation for the removal of his right leg. This amputation was made to avoid the spread of gangrene, which originated from an infected toe.

Mr. Smith began business in Baltimore as a boy, in the house of Woodward, Baldwin & Co., commission dry goods merchants. In 1863 he came to New York when the house opened a branch office here, with an interest in the firm. He rose speedily to the head of the house, which position he held until his retirement on July 1, 1916. Since that time he occupied an office in the headquarters of the firm and has been a regular visitor to the market up to the time of his last illness.

Outside of the commission business, he was a director in the Hanover Bank for more than 50 years. In this connection he was identified in a financial way with many southern cotton mill enterprises, being responsible for the development of important plants and for their guidance as going institutions. He was twice married but leaves no children. Business occupied his life to the exclusion of outside social interests. Although regarded as more or less autocratic by nature, his judgment on business matters was eagerly sought and cheerfully given. By those who knew him intimately he was held very highly in their esteem and will be missed by large numbers in the industry. Interment will be in Baltimore.

Horace Bullock

Horace Bullock, prominent in the wool trade for more than 37 years, and a member of the firm of Bullock Bros., 46 S. Front St., Philadelphia, died at Atlantic City, N. J., Aug. 31, where he had gone to recuperate from illness. Mr. Bullock was in his 59th year. He had been unwell for several months and had not been active in business since Dec. 31, 1925, when the partnership of Bullock Bros., was dissolved by mutual consent. The firm was more than 100 years old, being one of the group of concerns that had been in continuous business for more than a century, who are honored each year by the Philadelphia Chamber of Commerce. Mr. Bullock was well known in the trade in this vicinity and in New England. He is survived by his widow and two sons, and was a vestryman of the Church of the Redeemer, Bryn Mawr, Pa.

Robert P. Heron

Robert P. Heron, for many years a prominent figure in the Mohawk Valley textile industry, died at his home in Utica, N. Y., after a brief illness. He was born at Fallbrook, Pa. in 1868. In 1908 he organized the Heron Felt Novelty Co. at Dolgeville, which was later removed to Utica and reorganized as the Heron Mfg. Corp., for producing wool novelties. He disposed of his business in 1918 and for the last several years had devoted his time to research and textile inventions.

Alliston Stuart Wright

Alliston Stuart Wright, who was master mechanic of the Clinton, Mass., plant of the Bigelow-Hartford Carpet Co., until obliged to retire a year ago on account of ill health, died at his home in that town on Aug. 27, aged 60 years. Previously he held a similar position with the Grant Yarn Co., Fitchburg, Mass. Mr. Wright was a native of Clinton and prominent in town affairs.

James McD. Bruce

James McDuffie Bruce, president of the Bank of Pickens and a director in both the Pickens and Glenwood Cotton Mills, died at his home in Pickens, S. C., on Aug. 30. Mr. Bruce was also one of the organizers of the Pickens Cotton Mill. He was 65 years of age.

J. H. Quinlan

J. H. Quinlan, for 25 years superintendent and general manager of the Cedartown (Ga.) Cotton & Expert Co. until he retired from that connection in 1924, died on Aug. 30 at his home in Los Angeles, Cal., where he had taken up his residence.

Chang Chien

Chang Chien, a leading cotton mill owner and industrialist of China, died Aug. 25 at the city of Nanuncchow, near Shanghai, at the age of 74. He was one of the most progressive and far sighted cotton manufacturers in China.

Ask the Man Who Uses Them

WE don't care who he is. The manufacturer who has installed Brinton machines knows through experience the greater profits and better product they assure.

Ask him about Brinton performance, economy of operation, uniformity of product or any of the other factors which show on the profit side of your balance sheet.

Long experience in manufacturing knitting machinery for many purposes has given us knowledge that you can capitalize upon.

We will gladly send you full information of our complete line.

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South America: Santiago Scotto, Moreno, 1756. Casilla Correo 662, Buenos Aires, Argentine Republic.

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Australia: J. H. Butter & Co., Sidney, Melbourne.

China and Japan: Elbrook, Inc., 51 Kiangse Road, Shanghai, China

Everyone concerned with the production or sales of knitted fabrics will be interested in the exhibit of a complete Full-Fashioned Hosiery Mill in operation, in The Liberal Arts Building at the Sesqui-Centennial International Exposition.

This unique display is under the direction of—

Harry C. Aberle Co.
Apex Hosiery Co.
Berkshire Knitting Mills
Fidelity Knitting Mills
Hancock Knitting Mills
Textile Machine Works

You will be most cordially welcomed.

See also CONSOLIDATED TEXTILE CATALOG

FABRICS

Cottons Still Firm

Buyers Skeptical of Raw Cotton Unwilling to Anticipate

An increasingly steady demand for lines of staples is reported by cotton goods selling agents, who anticipate an even more general response to the attitude of strength exhibited on practically everything in the market shortly after Labor Day. A good many buyers are still away on their vacations and salesmen on the road report only an indifferent interest, except where merchandise is needed to fill in lines, and then deliveries are wanted immediately. A better retail demand is noted and jobbers also report requests for increased quantities and find their stocks are being diminished.

Cotton Status Uppermost

The question of whether cotton is to maintain its position is being agitated, not only by the buyer but by the seller as well. There are those who look for lower prices when ginning reports are received and who anticipate that such weakening will have its effect on the market. Nevertheless a factor which is possibly not receiving as much consideration as it might is held to be the short interest that exists in manufacturing circles. There is no doubt that a good many orders have been taken by manufacturers who are not covered on the raw material. If this is sufficiently general the operations of those who must buy cotton to fill their contracts may have a very bullish effect on raw cotton and may offset any influence that large ginning reports may exert. Those who make a careful study of the situation prophesy that there is not likely to be much change in the raw material market for some little time, but buyers are not to be frightened into anticipating their requirements and are operating only as their needs demand.

Gray Goods Quiet

Few contracts in print cloths were noted during the early part of the week, but efforts to secure goods at a fraction under the quoted price were unavailing, except in isolated instances where possibly a concession of 1/16 cent was heard. There has not been during the last few days the same disposition to operate as was in evidence immediately after the last report. It is apparent that buyers are somewhat skeptical as to the reduced size of the crop and are willing to run the risk of higher prices rather than to load up at current values. They evidently feel they may be able to obtain concessions later on, in time to satisfy current requirements. On finer goods a more active market is noted in certain quarters, though business is spotty and no cencerted demand in evidence.

Finished Goods More Active

Buyers who are in the market continue to examine with interest the offerings of wash goods fabrics and some good orders are reported to have been placed. Here, too, improvement is expected after Labor Day, when a larger number of operators is looked for. Varying experiences have been reported on lines which have been shown of late. Certain offerings, because of their artistic merit, have met with very general approval, but others do not seem to exhibit the excellence of styling that could be desired. The buyer is very quick to discern this lack of originality and to operate accordingly. It is expected, however, that generally speaking the wash goods business will attain very satisfactory proportions for the current season.

Sheep's to Man's Back in 11 Hours

TORONTO, CANADA.

AN interesting feature of the opening on Aug. 30 of the textile exhibit under the auspices of the Canadian Woolen and Knit Goods Manufacturers Association at the Canadian National Exhibition, was the delivery of a light fall overcoat, the manufacture of which had been begun in Brantford, 60 miles from Toronto, at 4.45 a.m. that morning. The completed coat was delivered in Toronto Bay off the Exhibition grounds at 7 o'clock in the evening, being dropped with a man in a parachute from an aeroplane. The completed coat was worn by the Liuetenant-Governor of Quebec when he officially opened the textile exhibit at the Exhibition. The time taken sets a new world record of eleven hours from sheep's back to completed garment and this is the first time it has been tried on the North American continent. A hundred years ago it was carried out on a wager in England, but with sample machinery. This time it was carried out completely by Brantford and Brant County men, with Brant County sheep and Brantford mills and tailors assisting.

A Few Mills Satisfied with Clothiers' Spring Orders

The later openers in the men's wear trade are reported to have the edge on some of their earlier competitors. Buyers have delayed purchasing and early opening appears to hold little advantage. A number of the smaller independent mills are reported to have done fairly well as regards spring. Two mills running on woolens report nearly sold up conditions on certain lines and a number of worsted mills appear satisfied with their trade.

One of the steps taken in the evolution of men's wear fabrics is the current gain in 3 and 4-ply cloths. Crisp, durable fabrics which made their first appearance in tropicals are being taken up in the heavier weights.

Stock goods are being sold here and there for fall use and it is the belief of some merchants that the cloth jobber is in line for good business this fall. Colors taken show preference for grays and tans with interesting blue shades, particularly with grayish cast also in the running.

Bolivias Reach Sold-Up State

Though the work of women's wear buyers has been gradual during the last three months, their orders have been accumulating to such an extent that a number of makers are sold up on bolivias for some time ahead. This is the best single fabric in the market at present so far as salability is concerned. A popular number which has been quoted from the mill at $4.42½ regular is reported selling from second hands at $5.00 net.

Colors sought in coatings include browns, greens, reds and blues with many students of the situation expecting black to rise to unusual prominence before long.

The women's wear strike is entering its final phase. Gov. Smith reproved the International Ladies Garment Workers Union for not accepting his suggestion that the issues be submitted to arbitration with the Industrial Council of the "inside" cloak manufacturers. He urged the impartial chairman to endeavor to bring about arbitration and meetings were held this week which may effect a settlement.

Widder Bros. Issue New Satin Color Card

Widder Bros., 156 Madison Ave., New York, have just issued a new color card of their crepe back satin, Quality 315-A. They show 20 new shades in which they are featuring this satin. This is the fifth year in which this fabric has been repeated for fall and winter, and the increasing demand is taxing the production of their mill at Emaus, Pa.

New Agents for Essex Mills

Minot, Hooper & Co. have been appointed sole selling agents of the reorganized Essex Cotton Mills, Newburyport, Mass. R. P. M. Eagles, formerly of Taylor, Armitage & Eagles, previous agents of the mills, has become associated with the selling house.

Doubt Canton Vogue

Others Believe Fabric Will Continue Good Through Fall Months

Following two months during which Canton crepes have moved easily and in volume, some doubts are beginning to be expressed as to whether this fabric will continue good right through the fall as many believe. The factors that will gently put the skids under the Cantons are thought to be in the making right now. Chief among these is the admitted fact that the length of time that the dyers are holding the goods may cause a surplus of merchandise when deliveries begin to be made freely.

Many manufacturers that put goods in work when they saw the first signs that the Cantons were likely to have a run, are only beginning to get them through now. Others who temporized for a week or more have not yet seen even a sample piece despite the fact that they have the goods sold in many instances. All the goods are weighted, in any case a large percentage of them, and it is this that causes the merchandise to accumulate in the dyers hands.

Of course things may work out differently. Dress manufacturers are using the Cantons liberally and may find that far from any oversupply, they can use all the goods being produced. Some saw in the quantities of weighted satins going into work a month or more ago, the same signs of overproduction. Actually satins are none too plentiful now that they are ending their season. The same thing may happen with the heavy crepes.

Silk Situation at a Glance

PRODUCTION: Likely to reflect gains during August in consumption figures.

DEMAND: Good.

STOCKS: Increasing slightly due to large quantities at dyers.

RAW SILK: Prices very firm; stocks slightly larger.

SENTIMENT: Undercurrent of uncertainty.

Cotton Goods Quotations

	Sept. 1	Aug. 26	Sept. 2, 1925
Spot cotton, N. Y.	18.90¢	19.20¢	22.60¢
Print Cloths:			
27-in., 64x60, 7.60	5½-5⅝¢	5½-5¾¢	6½¢
38½-in., 64x60, 5.35	7⅞-8¢	7⅞-8¢	9⅜-9½¢
39-in., 68x72, 4.75	8⅝¢	8⅝¢	10½¢
39-in., 72x76, 4.25	9⅝¢	9⅝¢	11½¢
39-in., 80x80, 4.00	10⅜¢	10½¢	12¼¢
Brown Sheetings:			
36-in., 56x60, 4.00	9½¢	9½¢	10¼-10⅜¢
36-in., 48x48, 3.00	11¢	11¢	12½¢
37-in., 48x48, 4.00	9-9½¢	8⅞-9⅜¢	9½-9⅝¢
Pajama Checks:			
36½-in., 72x80, 4.70	9⅛-9¼¢	9⅛-9¼¢	10½¢
36½-in., 64x60, 5.75	7¼-7⅝¢	7¼-7⅝¢	8⅝¢
Miscellaneous			
Drills, 37-in., 3 yd	11-11½¢	11¢	12⅝¢
Denims, 2.20s	15¢	15¢	19¢
Tickings, 8 oz	19¢	*18½¢	23¢
Standard prints	8¢	8¢	9½¢
Eastern staple ginghams, 27-in.	9¢	*8¾¢	11½¢

*Nominal.

Factors of Success

Engineers who designed your plant and machinery carefully calculated factors of safety. In locating a new textile mill or a branch textile mill, there are certain factors of success which you can estimate in advance. These factors of success include: labor supply, electric power supply, nearness of coal, type and volume of water supply, and the kind of railroad service.

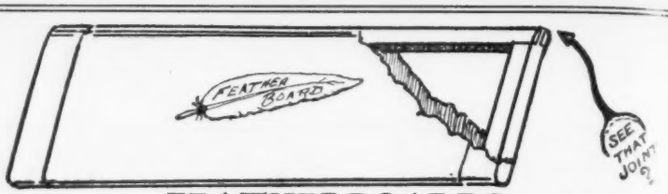
Look into these factors of success in cities and towns served by the Central of Georgia Railway. You will find all the essentials for successful textile manufacturing in the territory traversed by the Central of Georgia. Detailed information on request.

J. M. MALLORY, *General Industrial Agent*

CENTRAL OF GEORGIA RAILWAY

Savannah, Ga.

CENTRAL OF GEORGIA



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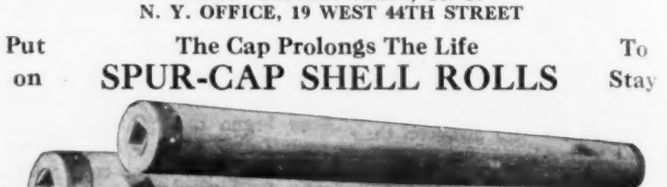
EAST GREENWICH, R. I.

N. Y. OFFICE, 19 WEST 44TH STREET

Put on — The Cap Prolongs The Life — **SPUR-CAP SHELL ROLLS** — To Stay



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No. 9 Foot Power Rotary Sewing Machine

An Exceptionally Efficient Machine

This Portable Foot Power Sewing Machine has earned itself a reputation for economy in hundreds of mills. Gear driven, it is easy to operate and capable of attaining a high rate of speed. It is used in various parts of the mill, principally in the dyehouse, bleachery and print room, for sewing Woolen, Cotton, Burlap and other fabrics of all weights, wet or dry. Sewing Head operates without arm or connection. Write for details.

Tillinghast Supply & Machine Co.

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FINANCIAL

Fall River Improves

Good Demand and Only Small, Scattered Offerings

FALL RIVER, MASS.—Trading in local mill stocks the past week did not reach the volume of the previous week still a very good demand has been in evidence at bid prices and the few sales were in most instances at an advance. The offerings continue to be scattered and small, even of the weaker issues.

Bourne mills touched 65 on active buying, which is a new high, and at the close of the week bids of 64 developed that no more stock was available under 67½. Flint mills also reached a new high through sale at 83½, and bids of 82 later found none offered under 85. The bid price for Pilgrim mills was advanced to 145 without bringing out any stock and bids of 142 failed of bringing out any Sagamore Mfg. Co. It is probable that considerably better than 142 would be paid for Sagamore should any appear upon the market.

American Linen Co. has continued in demand as for the previous week at 14, but none appeared for less than 16, and no trading resulted in this issue. An even wider margin between bid and ask price is noted in the case of Arkwright mills, 10 being the bid price and 15 the asking price. No sale of this issue is quoted. An odd lot of Border City Mfg. Co. is reported as having sold at 42 and that upon 40 being bid for more not less than 44 would be considered by the holders. Chace has been in demand at 25, but none came upon the market at this price.

New Bedford Dividends

New Low Point Touched in Third Quarter Figures

NEW BEDFORD, MASS.—The third quarter's dividends of the New Bedford cotton mills set a new low record with an average of approximately 91c per share. In the first quarter of this year the average was $1.17, with $1.14 as the average in the second quarter. The total amount distributed was $631,302.50 on a total capitalization of $68,073,100, and the indications are that the present year will be the leanest for stockholders for many years.

During the third quarter, 10 mills passed the dividend, these being Whitman, Sharp, Potomska, Manomet, Nonquitt, Fairhaven, Gosnold common, Grinnell, Butler and Booth common. The Wamsutta, Nashawena and Holmes common also reduced the rate from the previous quarter.

Nashawena, despite the fact that the rate was cut from $2 to $1.50, distributed the largest amount with $112,500, Dartmouth being second with $87,500, of which $7,500 was on the preferred stock. Bristol, Dartmouth common, Kilburn, Quissett common and Soule maintained their rate of $2, with Neild paying $2 and an extra of $1.

The rates and amounts distributed:

Corporation	Capital	Rate	Amt. paid
Acushnet	$2,000,000	1½	$30,000 00
Beacon, pfd.	1,800,000	1½	27,000 00
Booth, com.	852,000	...	.....
Booth, pfd.	344,100	1½	8,602 50
Bristol	1,000,000	2	20,000 00
Butler	2,300,000	...	.....
City	750,000	1½	11,250 00
Dartmouth, com.	4,000,000	2	80,000 00
Dartmouth, pfd.	600,000	1¼	7,500 00
Fairhaven, com.	1,500,000	...	.....
Fairhaven, pfd.	2,000,000	...	.....
Gosnold, com.	1,650,000	...	.....
Grinnell	1,500,000	...	.....
Hathaway	2,000,000	1½	30,000 00
Holmes, com.	600,000	1	6,000 00
Holmes, pfd.	600,000	1½	9,000 00
Kilburn	2,250,000	2	45,000 00
Manomet	8,000,000	...	.....
Nashawena	7,500,000	1½	112,500 00
Neild	1,200,000	3	36,000 00
N. B. Cotton, pfd.	750,000	1½	11,250 00
Nonquitt	4,800,000	...	.....
Pierce	600,000	8	48,000 00
Potomska	1,800,000	...	.....
Quissett, com.	2,000,000	2	40,000 00
Sharp, com.	2,656,000	...	.....
Sharp, pfd.	1,161,000	...	.....
Soule	1,260,000	2	25,200 00
Taber	1,600,000	1½	24,000 00
Wamsutta	6,000,000	1	60,000 00
Whitman	3,000,000	...	.....
	$68,073,100		$631,302 50

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
15	Farr Alpaca	100	172–172¼	+ 7⅝
15	Manomet Mills	100	20	+ 1
10	Nonquitt Spinning	100	37½	+ ¾
2	Lincoln Mfg. Co.	100	48	+ 3
4	Pepperell	100	119	— ¾
50	Lancaster, com.	100	27½	+12⅜
2	Lyman	100	115⅛	— 3⅞
6	West Point	100	132⅝–132¾	— 1½
7	Naumkeag	100	155⅛	— ⅛
15	Lancaster, pfd.	100	50	+19½
10	Great Falls	100	14	+ 1½
10	Dwight	25	24½	+ 5⅞
7	Weetamore Mills	100	21	+ 3⅜
7	Plymouth Cordage	100	135-134⅜	— 1¼
50	Nashawena	100	73½	+ 3⅜

210 Total.

Silk Stocks on N.Y. Exchange

(Week ending Aug. 31, 1926)

1926 High	Low	Stock	Sales	High	Low	Last
39¾	30	Belding-Hemingway	1,100	30½	30¼	30⅝
32½	12⅝	Century Ribbon	2,500	18½	16½	17½
47⅝	33¼	Julius Kayser	10,100	42½	39	42½
28⅛	15	H. R. Mallinson	1,000	17	15	15
22	12¼	Van Raalte	.....	.....	.....	.....

Pocasset to Pay Dividend to Noteholders

FALL RIVER, MASS.—The Pocasset Mfg. Co. is reported as about to pay a 15% dividend on a pro rata basis to holders of its notes, the payment being made possible at this time by large sales of cloth.

MEMPHIS, TENN. Warlick Aiken, 75 Union Ave., has engaged Thomas H. Allen, Bank of Commerce Bldg., engineer, to prepare plans for a one-story and basement cordage mill on local site, 52 x 150 ft., for which it is expected to ask bids at an early date.

WARE, MASS. The Otis Co. is the town's largest taxpayer, its assessment this year being $70,382.33, which is fourth of the entire town tax. Other textile plants will pay these taxes: George H. Gilbert Mfg. Co., $10,962; Ware Woolen Co., $10,681.

Southern Securities Quiet

GASTONIA, N. C. Aug. 28.—Trading continued quiet in cotton mill stocks for the week ending today, and the average bid price of 25 most active stocks closed at 110.28, down only 4 points for the week, according to figures prepared by R. S. Dickson & Co. Belton common, with a decline of $6 per share, was the only stock to show a decline of over $1, while a number of stocks made advances of $1 to $2 per share. This was particularly noticeable in the Belmont, N. C. group of mills. Several orders for small lots of Mooresville appeared in the market toward the close of the week, lending support to this stock, which for the last several weeks has been slowly declining.

Echota Cotton Mills Declare 50% Stock Dividend

CALHOUN, GA.—A dividend of 50% was declared by the Echota Cotton mills here on Aug. 21. A resolution was unanimously adopted converting the dividends into preferred stock, the same to be distributed pro rata among the stockholders. This will make the total outstanding capital stock $460,000. H. F. Jones, who has been president of the mill for the last two and a half years, has placed it on a sound financial basis. According to figures furnished by officials of the mill, the payroll is $225,000 per annum; the output is 10,000,000 yards of high grade sheeting with average value of $1,500,000. Mr. Jones states that seven to eight regular customers handle 75% of the output of the mill.

Grinnell Passes Dividend

NEW BEDFORD, MASS.—The Grinnell Mill of this city has passed its dividend for the third quarter, being the first break in disbursements by this corporation in 41 years. Since it started paying dividends in 1885, the average yield has been 15¼% cash and securities disbursed amounting to $5,886,000. The Potomska Mills of this city shows a loss of $69,242 for the past fiscal year ending June 30, 1926, this being an improvement on the previous year, when the loss was $184,000.

Gets Federal Tax Rebate

FALL RIVER, MASS.—The Stevens Mfg. Co. has received a tax rebate of $209,000 from the Federal government from the tax which was paid under protest for the year 1921 and a still further rebate is expected from the assessments of later years.

POESTENKILL, N. Y. The Thermo Mills, Inc., will resume operations in its plant on Sept. 7 after a three weeks' shutdown.

Fall River Mills Stocks

(Quotations furnished by G. M. Haffords & Co.)

	Bid	Asked
American Linen Co.	...	21
Arkwright Mills	15	...
Barnard Mfg. Co.	...	50
Borden Mfg. Co., Richard	40	...
Border City Mfg. Co.	40	...
Bourne Mills Co.	60	70
Chace Mills	...	30
Charlton Mills	110	115
Cornell Mills	...	85
Davis Mills	70	...
Davol Mills	25	...
Flint Mills	77	...
Granite Mills	...	40
King Philip Mills	118	...
Laurel Lake Mills (com.)	...	...
Laurel Lake Mills (pfd.)	60	...
Lincoln Mfg. Co.	45	...
Luther Mfg. Co.	...	125
Mechanics Mills	20	...
Merchants Mfg. Co.	50	...
Narragansett Mills	...	...
Osborn Mills	...	45
Parker Mills, com.	...	...
Parker Mills (pfd.)	...	...
Pilgrim Mills (com.)	...	152
Pocasset Mfg. Co.	26	...
Sagamore Mfg. Co.	138	...
Seaconnet Mills	...	...
Shove Mills	...	25
Stafford Mills	...	40
Stevens Mfg. Co.	105	112
Troy C. & W. Mfg.	100	...
Union Cotton Mfg. Co.	75	...
Wampanoag Mills	28	...
Weetamoe Mills	15	...

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushnet Mills	15	78
Beacon Mfg. com.	125	...
Beacon Mfg. pfd.	...	97½
Booth Mfg. Co., pfd.	...	100
Bristol Mfg. Co.	...	125
Butler Mfg. Co.	62	67
City Mfg. Co.	98	102
Dartmouth Mfg. Co., com.	104	108
Dartmouth Mfg. Co., pfd.	84	88
Fairhaven Mills, pfd.	...	15
Gosnold Mill, com.	10	...
Gosnold Mill, pfd.	...	31½
Grinell Mfg. Co.	...	72
Hathaway Mfg. Co.	100	...
Holmes Mfg. Co., com.	...	75
Holmes Mfg. Co., pfd.	...	80
Kilburn Mill	109	...
Manomet Mills	16	20
Nashawena Mill	72	74½
N. B. Cotton Mills, com.	100	...
N. B. Cotton Mills, pfd.	80	...
Neild Mill	137½*	...
Nonquitt Spng. Co.	36	...
Pemaquid Mills	...	26
Pierce Mill	330	370
Potomska Mills	55	...
Quissett Mills, com.	99	103
Quissett Mills, pfd.	90	...
Sharp Mfg. Co., pfd.	29	32
Sharp Mfg. Co., com.	10	...
Soule Mill	140	...
Taber Mill	87*	...
Wamsutta Mills	61	64
Whitman Mills	38	...

* Ex-Dividend.

N. Carolina Textile Stocks

(Taken from list of Southern Mill Stocks quoted by R. S. Dickson & Co., Gastonia, N. C., and Greenville, S. C.)

	Bid	Asked
Acme Spinning Co.	103	108
Am. Yarn & Processing Co.	91	96
Arlington Cotton Mills	85	90
Arrow Mills	80	90
Cabarrus Cotton Mills	140	161
Cabarrus Cotton Mills 7% pfd.	109	...
Cannon Mfg. Co. (par $10)	17	20
Chadwick-Hoskins Co. (par $25)	13	14½
Chadwick-Hoskins Co., 8% pfd.	102	104
China Grove Cotton Mills	105	111
Clara Mfg. Co.	70	77
Climax Spinning Co.	119	125
Clover Mills	...	75
Crescent Spinning Co.	91	97
Dixon Mills	95	100
Durham Hosiery, 7% pfd.	49	55
Durham Hosiery "B"	6	...
Eastern Mfg. Co.	...	58
Erwin Cotton Mills Co.	115	131
Erwin Cotton Mills Co., 6% pfd.	100	103
Gibson Mfg. Co.	130	...

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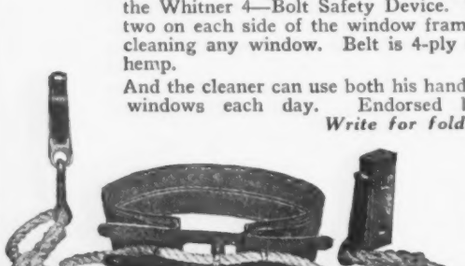

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Financial—Continued

Globe Yarn Mills (N. C.)..	50	...
Gra) Mfg. Co.....	...	96
Hanes, P. H. Knitting Co.	7½	8½
Hanes, P. H. Ktg. Co., 7% pfd.	98	100
Henrietta 7% pfd.....	...	91
Imperial Yarn Mills.....	98	101
Jennings Cotton Mills.....	230	240
Linford Mills	98	104
Locke Cotton Mills Co.....	110	130
Lola Mfg. Co.....	...	70
Majestic Mfg. Co.....	174	...
Mansfield Mills	120	130
Mooresville Cotton Mills...	48	52
Mooresville Cotton Mills, 7% pfd.	...	96
Myers Mill	75	82
National Yarn Mill.....	100	110
Parkdale Mills	74	81
Perfection Spinning Co....	97	101
Ranlo Mfg. Co.....	135	...
Rhyne-Houser Mfg. Co.....	75	85
Roanoke Mills, 7½% 1st pfd.	101	...
Roanoke Mills, 8% 2nd pfd.	98	100
Rosemary, 7½% pfd	99	101
Rowan Cotton Mills Co..	...	95
Seminole Cotton Mills Co..	...	80
Sterling Spinning Co.....	103	115
Stowe Spinning Co.....	98	102
Victory Yarn Mills Co....	51	55
Winget Yarn Mills Co.....	...	65
Wiscasset Mills Co.....	200	...

Southern Mill Stocks

Quotations furnished by A. M. Law & Co., Inc., Spartanburg, S. C.

	Bid	Asked
Abbeville Cotton Mills.....	...	96
American Spinning Co.....	...	215
Anderson Cotton Mills.....	90	95
Arcade Cotton Mills.....	60	71
Arcadia Mills	225	...
Arcadia Mills, pfd..	101	...
Arkwright Mills	100	...
Augusta Factory, Ga.. ...	20	30
Avondale Mills, Ala.....	900	950
Beaumont Mfg. Co.....	320	...
Belton Mills	44	51
Belton Mills, pfd.....	94	97
Bibb Mfg. Co.....	170	180
Bibb Mfg. Co. 6% pfd.....	99	101
Brandon Mills, pfd.....	98	101
Calhoun Mills	114	120
Cannon Mfg. Co. (par $10).	16½	...
Chadwick Hoskins Co. (par $15)	15	17
Chesnee Mills	135	...
Chiquola Mfg. Co.....	290	300
Chiquola Mfg. Co., pfd.....	96	98
Clifton Mfg. Co.....	134	137
Clinton Cotton Mills.....	290	...
Columbus Mfg. Co., Ga.....	118	125
Cowpens Mills	...	55
D. E. Converse Co.....	104	110
Dallas Mfg. Co., Ala.....	130	140
Darlington Mfg. Co.....	75	85
Drayton Mills	100	...
Duncan Mills	...	85
Duncan Mills, pfd.....	90	93
Eagle & Phenix Mills, Ga...	...	140
Easley Cotton Mills, pfd...	87	90
Enterprise Mfg. Co., Ga.....	105	115
Gaffney Mfg. Co.....	70	75
Gainesville Cotton Mills, Ga.	185	190
Glenwood Mills	133	...
Gluck Mills	87	90
Graniteville Mfg. Co.....	135	...
Greenwood Cotton Mills....	400	...
Grendel Mills	250	...
Grendel Mills, pfd. (par $50)	47	49
Hamrick Mills	110	120
Hartsville Cotton Mills.....	...	151
Inman Mills	145	155
Inman Mills, pfd.....	102	...
Jackson Mills	200	...
Judson Mills	156	160
Judson Mills, pfd.....	101	103
King, John P. Mfg. Co., Ga.	104	115
Laurens Cotton Mills.....	150	...
Limestone Cotton Mills.....	...	120
Marion Mfg. Co., N. C.....	140	...
Marlboro Mills	32	36
Mills Mill	290	...
Mollohon Mfg. Co.....	100	...
Monarch Mills	125	130
Monarch Mills, pfd.....	101	...
Musgrove Cotton Mills.....	...	71
Newberry Cotton Mills.....	118	121
Ninety-Six Mills	150	...
Norris Cotton Mills.....	...	80
Orr Cotton Mills.....	97	100
Orr Cotton Mills, pfd.....	96	99
Pacolet Mfg. Co.....	209	215
Pacolet Mfg. Co., pfd.....	102	105
Panola Cotton Mills, Class A pfd. (par $85).....	77	80
Pelham Mills	15	18
Pickens Cotton Mills.....	125	...
Piedmont Mfg. Co.....	134	137
Poe, F. W., Mfg. Co.....	108	111
Poinsett Mills	70	75
Riverside Mills (par $12.50)	10	10½
Riverside and Dan River....	175	185
Saxon Mills.....	91	...
Sibley Mfg. Co., Ga.....	45	60
Spartan Mills.....	152	...
Toxaway Mills (par $25)...	33	34½
Union-Buffalo Mills	...	50
Union-Buffalo Mills, 1st pfd.	90	92
Union-Buffalo Mills, 2nd pfd.	47	50
Victor Monaghan Co.....	98	100
Victor Monoghan Co., pfd..	110	...
Ware Shoals Mfg. Co.....	145	150
Watts Mills	...	50
Watts Mills 1st pfd.....	88	91
Watts Mills, 2nd pfd.....	100	105
Whitney Mfg. Co.....	65	75
Williamston Mills	200	...
Woodruff Cotton Mills.....	...	133
Woodside Cotton Mills.....	125	...
Woodside Cotton Mills Co., pfd.	88	90

New England Textile Stocks

(Quotations at "Public Sale" are based upon last sales at Boston public auction and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.)

	Public Sale	Bid	Asked
Am. Wool. pfd.....	81	...	...
Am. Mfg. pfd.....	82	80	82
Amoskeag, com.	50⅞	...	...
Androscoggin	52	52	55
Appleton	...	30	35
Arlington	71½	69	71
Bates	148½	130	137
Berkshire Cot.	...	134	138
Bigelow-Htfd. com...	77	...	...
Boott	...	103	108
Edwards	80	50	60
Esmond, pfd.	100	98	...
Everett	35	19	22
Farr Alpaca	172¼	169	174
Great Falls	14	10	13
Hamilton Woolen ...	21	20	...
Hill	25	12	16
Ipswich, com.	55	50	54
Ipswich, pfd.	84	80	85
Lawrence	67⅞	70	74
Ludlow Asso.	168	165	170
Lyman	115¼	114	...
Massachusetts	56¼	53	55
Merrimack, com.	99	103	106
Nashua, com.	40	40	45
Nashua, pfd.	81	79	83
Naumkeag	155¼	155	158
N. E. So. pfd.....	10	...	...
Otis Co.	23¼	22	27
Pacific	40	...	...
Pepperell	119	118	...
Plymouth Cordage...	134¾	134	138
Tremont & Suffolk...	38¼	37	...
York	30¾	32	35

Business News

Progress on Foster Machine Co. Addition

WESTFIELD, MASS.. Work on the addition to the Foster Machine Co. has progressed rapidly and the roof is now on. Recent subcontracts awarded are as follows: Roof and sheet metal, Guarantee Roof Co.; paint, H. L. Ross Co.; doors and finish, Hampden Lumber Co., all of Springfield. The plans for the addition were drawn by M. B. Harding, Springfield, and E. J. Pinney, Springfield, is the general contractor.

Incorporates to Trade in Power Plant Equipment

WORCESTER, MASS. Llewellyn M. Reed, formerly master mechanic for the Worcester Woolen Mill Co., has incorporated the Reed Engineering & Supply Co., Inc., with a capital stock of $25,000 to trade in power plant equipment. Norman Schoenfeld is president of the company and Mr. Reed treasurer. Its office is at 332 Main St.

PARSONS, W. VA. The local plant formerly operated by the Philippi Blanket Mills, has been taken over by the Acworth (Ga.) Mills, which are planning immediate resumption of operations. New picking machinery has already been shipped to Parsons, and an addition to be equipped as a dyehouse, is planned. The product of the mill will be sold as formerly through the Dorman Commission Co., New York. Miss Esther A. Sill, assistant treasurer of the Acworth Mills, is in charge of the Parsons plant.

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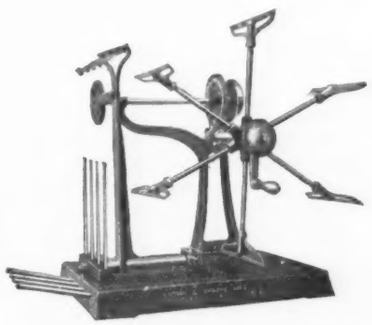

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See also CONSOLIDATED TEXTILE CATALOG

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PAULSON, LINKROUM & CO.
INC.

COTTON YARNS

of every description for Weaving and Knitting

We specialize in Cotton Yarns for Export

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CHARLOTTE, N. C.

COTTON YARNS
for **Particular Purposes**
SPUN BY
The Arrow Mills, Inc.

This plant runs largely on cotton yarns required for special usage in our customers' mills—not the ordinary run of yarn but a fine combed and super carded product, spun of choice long staple white cotton in sizes ranging to 60s single and ply.

Quotations and samples promptly submitted

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Also exclusively representing
GRAY MFG. CO.
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ARLINGTON COTTON MILLS
PARKDALE MILLS, INC.
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Johnston Mills Company
"Direct to Consumer"
Mercerized Yarns

Sole Selling Agents for
Fine Single Mercerized, Bleached, Tinted and Dyed yarns of
THE ELMORE COMPANY, Spindale, N. C.
Two-Ply Mercerized, Gassed, Bleached and Dyed yarns of
SPINNERS PROCESSING CO., Spindale, N. C.

These yarns in all numbers to 100s/1 and 120s/2 have withstood the most exacting tests of the better class of knitters throughout the country, and no effort or expense is being spared to maintain them in the first rank of processed yarns.

Carded and Combed Yarns
From the established and controlled mills of the JOHNSTON GROUP, suitable for all requirements of the Knitting and Weaving trades.

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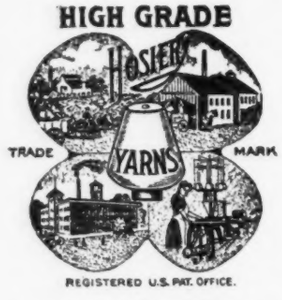
Range: 14/1-24/1



THE knitter nowadays is progressive. The tendency is to *improve* — and then improve some more. In looking for ways and means many knitters have found a change of yarn sometimes works wonders. Write for samples of King Yarns.

MILLS: BURLINGTON, N.C.
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SALES COMPANY
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906 JOHNSTON BLDG. CHARLOTTE, N. C.
CARDED-COMBED-MERCERIZED
COTTON YARNS
ALL COUNTS AND DESCRIPTIONS FOR THE KNITTING-WEAVING-CONVERTING TRADE
Mercerized Yarns by
DIXIE MERCERIZING CO.
IN NORTH CAROLINA

COTTON YARNS

Chattanooga Shows More Interest in Silk Than in Cotton Yarn

CHATTANOOGA, TENN.—A heavy advance in the price of thrown silk accompanied by a substantial increase in buying featured the local yarn market during the week ending Aug. 28. Silk prices advanced to $6.75 per pound for the thrown product. This seems to have greatly stimulated buying, manufacturers evidently seeking to protect themselves.

Orders for more silk were placed during the week here than for any similar period since the first of the year. There was also a slight increase in the buying of cotton yarns. In single cotton yarn, 10s continued at 30 to 31c. There were no special developments during the week with regard to mercerized yarns, 60s-2 still being quoted at 83 to 86c.

Cotton Spindles at 96.5% Activity in First Half Year

WASHINGTON, D. C.—The cotton spinning industry of the United States operated at 96.5% of its single shift capacity during the first six months of 1926, as compared with 96.8% in the corresponding period of 1925, a low record of 79.5% in 1924, and 106.8% in 1923, according to the Textile Division of Commerce Dept.

Buyers Want Yarn Promptly

Besieging Dealers to Expedite Deliveries Which Are Frequently Behind-hand

CONDITIONS in the cotton yarn market are decidedly different from those which obtained before the issuance of the last Government report. Notwithstanding the resistence of buyers to the new prices that have been named by spinners and approximately secured by dealers there is a decided increase in inquiry and also in actual sales consummated. Buyers are continuing to restrict their operations to nearby deliveries for the most part, although orders are recorded covering October and November. It is very apparent from the attitude of consumers generally that many of them have delayed too long and are in dire need of yarn which they cannot get for as prompt delivery as they desire.

Requests for Speedy Delivery

Dealers state they are having considerable trouble in satisfying their trade with respect to delivery. Where contracts are at all behind they are receiving messages from their customers asking the reason for the delay and insisting upon prompt action. In a good many cases orders that have called for delivery during September are being requested for immediate shipment. Other yarn is being sent by express. All these efforts on the part of the buyer indicate that he has very little stock on hand and needs more yarn than he can get at the time being. And yet this experience is not causing the majority to take precautions against a future shortage. Recognizing that they will need the yarn, nevertheless buyers are proceeding in the same hand-to-mouth fashion as they have been doing. They are afraid to buy, not being sold on present prices and fearing recessions in the future.

One Man's Answer

A direct selling agent for lines of combed yarn makes this reply to the prophecy of the buyer that prices are going to be lower. "In the middle of July there was a decided spurt in yarn buying and prices on combed yarn went up about five cents a pound in spite of the fact that cotton went off. If there should be a trend toward higher cotton prices, what would be the result upon yarn quotations? Don't you think it is a good time to cover?" As a matter of fact, combed yarns are cheaper today than at any time since the war, with a possible exception of a short period in 1924. Even then prices were hardly lower than they are today. The relative drop in combed yarns and in cotton has been altogether irreconcilable. Spinners are determined not to sell yarn except at a profit and are meeting with considerable success, the persistent efforts of the buyer to push the market down. A good many mills on the finer classes of yarn are finding it very difficult to secure the cotton from which to make this class of merchandise, except at a very radical increase. Premiums have to be paid and even then it is hard to obtain the desired quality and staple. The advance on combed yarn has led certain buyers to substitute other counts and the result is that they are having more or less trouble with the yarn they have purchased. Their effort to secure a cheap cost is meeting with results that are far from satisfactory.

Story of a Cancellation

A sudden change in conditions, such

Cotton Yarn Quotations

Carded—(Average Quality)

Double carded weav'g and knitt'g yarn 2c to 4c higher, according to size

Single Skeins or Tubes—(Warp Twist)

4s to 8s	—	—29½	20s	—	—33
10s	—	—30	24s	—	—35
12s	—	—30½	26s	—	—36½
14s	—	—31	30s	—	—38
16s	—	—32	40s	—	—48

Two-Ply Skeins and Tubes

8s-2	—	—29½	26s-2	—	—38
10s-2	30	—30½	30s-2	39½	—40
12s-2	—	—31	36s	—	—50
14s-2	—	—32	40s-2	50	—51
16s-2	—	—32½	40s-2 High breakage	53	—54
20s-2	34	—35	50s-2	60	—61
24s	37½	—38	60s-2	—	—64

Single Warps

10s	—	—31	24s	—	—37
12s	—	—31½	26s	—	—37½
14s	—	—32	30s	39½	—40
16s	—	—32½	40s	—	—50
20s	—	—34			

Two-Ply Warps

8s-2	30	—30½	24s-2	—	—38
10s-2	31	—31½	26s-2	—	—38½
12s-2	32	—32½	30s-2	—	—40
14s-2	—	—32½	40s-2 ordinary	—	—51
16s-2	32½	—33	50s-2	60	—62
20s-2	34	—35	60s-2	64	—65

8s-3 and 4-ply skeins and tubes; tinged, 25c; white, 28-29c.

Hosiery Cones (Frame Spun)

8s	—	—29	22s	—	—35½
10s	—	—30	22s (silver and Jaeger)	—	—36
12s	30	—31	24s	—	—36
14s	—	—31½	26s	—	—36½
16s	—	—32	30s tying in	36	—37
18s	—	—33	30s extra quality	—	—37
20s	—	—33	40s	48½	—49

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	44	—45	50s-2	62	—65
30s-2	49	—50	60s-2	70	—72
36s-2	53	—54	70s-2	83	—88
40s-2	55	—57	80s-2	93	—98

Singles

12s	39½	—40	30s	47	—49
14s	40	—40½	38s	52	—54
16s	40½	—41	40s	56	—58
18s	41	—41½	50s	62	—64
20s	42	—42½	60s	70	—72
24s	44	—44½	70s	83	—88
28s	47½	—48	80s	93	—98

Mercerized Cones—(Combed, Ungassed)

26s-2	60	—62	80s-2	1 13	—1 15
30s-2	62	—64			
36s-2	66	—68	**Singles**		
40s-2	68	—70	30s	—	—85
45s-2	71	—73	40s	—	—90
50s-2	74	—76	50s	—	—95
60s-2	83	—85	60s	—	—1 65
70s-2	97	—1 00	70s	—	—1 20
			80s	—	—1 60

Peeler—(Super Quality)

Single Cones

	Carded		Combed			Carded		Combed	
10s	33	—34	42	—44	26s	38	—39	50	—52
14s	34	—35	44	—46	30s	40	—42	52	—55
16s	34½	—35½	45	—47	36s	45	—47	57	—60
18s	35	—36	46	—48	40s	52	—54	62	—65
20s	35½	—36½	47	—49	50s	—	—	67	—70
24s	37	—38	40	—51	60s	—	—	75	—85

Combed Cones, Warps and Tubes

20s-2	48	—50	40s-2	60	—65
24s-2	50	—52	50s-2	65	—70
28s-2	52	—54	60s-2	75	—80
30s-2	53	—55	70s-2	90	—95
36s-2	57	—60	80s-2	1 00	—1 10

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones 2, 3, and 4-ply

	Peeler		Sakelarides	
	Average	Best	Average	Best
24s	— —56	— 61	80	83 —87
30s	— —58	— 63	83	87 —90
36s	— —60	— 65	86	90 —93
40s	— —65	— 70	90	94 —97
45s	— —70	— 75	95	1 00—1 03
50s	— —75	— 80	1 03	1 07—1 10
60s	— —85	— 90	1 14	1 17—1 20

Quotations are average prices of the counts and qualities indicated at the close of business Sept. 1. They do not cover lower or higher qualities unless specifically noted. For New York spot cotton prices, see page 121. For staple cotton prices, see page 123.

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

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CHARLOTTE, N. C.

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CHATTANOOGA, TENN.

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MILLS
CHESTER, PA.

Cotton Yarns—Continued

as has been witnessed within the last week or two, brings out a good many incidents in the course of business that have their humorous side. They may lead to serious consequences but at the same time they are calculated to reveal human nature at its best or worst. To illustrate: The story is told of the purchase of yarn before the last report came out. It was a different mill from any that the buyer had had relations with in the past and he requested that a sample case be sent to discover how the yarn was running. Upon receipt of this case he wrote the mill as well as the agent that it was entirely unsatisfactory and that he desired to cancel the yarn already received. The mill replied that they would not accept cancellation. In the meantime the report came out and a sagging market had changed to a firm or advancing one. The result was that the spinner advised the customer he was willing to accept cancellation and the reply came back forthwith that he had already refused to cancel the order and that it was in force. It is strange what a change in the character of material market conditions make.

Mill Prices Higher

The level established immediately after the announcement of the report has been for the most part maintained. There are exceptions for there were spinners who raised their product out of the market as soon as the Government figures were announced. These spinners have shown as inclination to become more moderate in their ideas or in other words to get down to a selling basis. There are very few instances, however, where any marked concession has been made and the prices which are being paid are a closer approximation to spinners' figures than they have been in a long time. Dealers bought considerable yarn last month but this yarn cannot be delivered for prompt shipment as it is yet to be made and therefore it is natural that dealers' prices should not be based on anything lower than the spinner is asking, with the possible exception of an elimination of the discount, either in part or altogether. The reason for spinners' firmness is the undoubted amount of business on their books. As before stated in these columns, this is the result of short sale covering and also because of purchases by dealers for their own account. The total is being swelled from day to day by consumers' operations. Stocks in dealers' hands are reduced to a minimum and anything for prompt delivery has to come from the mill in large part. This is another explanation for the difficulties which the seller is recounting on the matter of shipments.

Mill Operations Lessened

A good many mills at this time of the year close down for annual housecleaning. This in addition to the fact that quite a number have not started up after the curtailment of the summer is producing the basis for the complaint of tardy shipments. On such things as insulating yarn, for instance, for which there seems to be an increasing demand, dealers contend they are having a hard time to satisfy their customers and to explain why they are not receiving the yarn in the quantities expected.

Price Details

An idea of prices can be gathered from the staple counts—20s and 30s-2 warps. A good many telegrams have been received this week on the former count, none of which has offered yarn below 35c. A mill which sold this number last week at 34½c., notified a New York house a day or two ago that it had sold 75,900 lbs. at 35c., and had no more until October. Tinged yarn in this count has been sold at 33½c., while for white yarn 37 and 38c. are not infrequent quotations by the spinner. On 30s as high as 42c. has been quoted but the market is generally regarded as 40c. Buyers are paying this with reluctance but business has been consummated at this figure. On 30s cones, a purchase of a fair amount is recorded this week at 36½c. This is a better quality than tying-in yarn which, however, commands 36c., with certain spinners asking 36½c. On 12s cones, 31½c. has been asked but this doubtless can be bought at a cent below this figure. Knitters are still talking 30c. for 22s and it is said that a good deal of the spring business of New York State mills has been done on a basis of 30c. or lower. Very few knitters own any quantity of yarn at this figure. An exception is said to be the case of a New York knitter who has contracted for yarn to carry him through to next March at what he claims is a 30¼c. average. This manufacturer always has the reputation of being a very low buyer and it is not generally thought that his competitors have any such favorable basis for operations.

Bureau of Standards Progresses with Rayon Research

WASHINGTON, D. C.—Progress made at the Bureau of Standards in its rayon research program indicates, according to Charles W. Schoffstall, chief of the Textile Section, that undesirable features in the finished product may be traced back to the condition of the basic raw material used. The alpha cellulose content apparently is an important factor. It is not revealed yet whether the use of linters of wood pulp as a base affects the characteristics of the fiber.

A positive method for differentiating between cuprammonium and viscose rayon is being developed, and will be reported in these columns at an early date. The rayon research program is proceeding steadily but will require some time for completion because of the necessity for developing test procedure and relating results to the purity of the raw material and the processes of manufacture.

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SUPER QUALITY

COTTON YARNS

COMBED PEELER, 24s to 80s, single and plies

CONES, TUBES, SKEINS AND WARPS

Samples and quotations promptly furnished

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Combed Peeler Yarns
30's to 70's

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TUCKASEGEE SPINNING CO. INC. MOUNT HOLLY N.C.

48s All Plies and Descriptions

The high and uniform quality of these yarns is a result of eternal vigilance in every step from raw material to finished yarn.

Samples and prices cheerfully furnished.

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MERCERIZED
DYED
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AIR DRIED

ALL COUNTS
UP TO 100'S
Single and Ply

Holing Out—

IN Belmont Yarns—there is reached the climax of an endeavor begun back in the pioneer days of 1845 when the first cotton mill was established in this section.

Super-mercerized—and earning the term! Belmont Yarns are simply the fine combed yarns of Lineberger-Stowe processed in a plant ideal. They are filling a definite demand for a quality mercerized yarn in all counts and in dyed and bleached form.

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(LINEBERGER-STOWE MILLS)
BELMONT, N. C.

Selling Agents, HARDING, TILTON & COMPANY
BOSTON NEW YORK PHILADELPHIA CHICAGO
CHARLOTTE CHATTANOOGA

BELMONT YARNS

CONES COPS TUBES WARPS SKEINS

Cotton Yarns—Continued

Buying Yarns Ahead Resumed

Hand-to-Mouth Buying Policy Discontinued by Many Manufacturers—Contracting for Six Months

PHILADELPHIA

BULLISH sentiment exists in yarn to as great or greater degree than at any time since the upward movement now in progress started. In fact, at the beginning of the advance a month or five weeks ago most manufacturers remained skeptical as did several dealers who continued to sell yarns short, and it was not until three weeks ago that real buying by manufacturers came into prominence. Two weeks ago a number changed their position and came into the market, buying in the aggregate a large volume of yarn. This trend became more apparent, especially in view of the decrease of approximately 400,000 bales in the last Government crop estimate, and this week buying by mills became more general than at any time since the movement started.

Hand-to-Mouth Buying Stopped

It is a question whether it can be said hand-to-mouth buying continues in cotton yarns, there being numerous incidents to indicate that at least for the present a majority of manufacturers, both weavers and knitters in this market, have set hand-to-mouth buying aside. Whether this trend is a desirable one or one that in the long run will be deplored remains to be seen. The facts of the matter, however, point definitely to the viewpoint of those who assert a large portion of buying that has been done up until last week was a covering of short sellers, this term including those manufacturers who had goods orders on their books and only partially covered them with yarns and also dealers who sold yarns to manufacturers but did not place business with spinners.

Market Basis Sound

This condition was bound to result in a technical correction in the market and this has already occurred. This movement however resulted in such a drastic change in the market that the average manufacturer and dealer were forced to change their outlook and as a result the current week has found buying more general throughout the trade, both weavers and knitters being in the market for yarns to be delivered as promptly as possible with shipments to continue until next November. In fact buyers are now willing to buy beyond this time and are placing contracts to run after the first of the new year, in several instances calling for deliveries until next March, with knitters.

Largest Order Reported

One of the largest yarn selling organizations in the country reports the receipt this week of the largest individual order for yarns they have received for more than five years. Incidents of this character point to more than a mere covering by short interests and indicate to many in the trade that the long and uninterrupted period of hand-to-mouth buying has been, at least temporarily, discontinued by a large number of manufacturers. One of the most important reasons for this rather sudden reversal of policy has been due to the end of the long decline in price of both cotton and yarns and instead an upturn of importance has been taking place during the last five weeks, causing manufacturers to feel at this time that even higher prices are probable, as they expect another bearish cotton crop. They, therefore, believe yarns will go higher and they will save money by placing future delivery contracts at current prices.

Combed Falls in Line

The upward swing has already affected carded and mercerized yarns, both of which are three to five cents higher than a month ago, but an advance in combed qualities has been delayed until this week, spinners raising their quotations three or more cents in both single and ply yarns, the latter being quoted three cents above last week. With this section of the market falling into line the entire market may now be said to be strong, combed yarns now trending in the direction carded prices have taken for the last month.

Trade Sentiment Bullish

Will this movement continue? Sentiment in the trade is on the bullish side of the question, a majority looking for continued strength in the raw material market together with a good fall demand for yarns of all descriptions. Although considerable buying has already been done the opinion is fairly generally held that only a portion of it has yet been placed with dealers and spinners and in fact dealers believe if manufacturers receive additional goods orders during the next two months, which is likely to expect, their present yarn contracts will not be sufficient to see them through the fall months so additional buying will have to be done, to say nothing of the dealers who have not covered all of their short sales as yet.

Firmer Yarn Market

Cautious Buying Still Features the Situation

BOSTON.—A fair amount of business has been placed in cotton yarns at higher prices in this market but volume shows no particular expansion as compared with a month ago. The crop estimate is still quite unsettling particularly as it is understood that the bullish report as of August 16 was not based flatly upon the conditions prevailing at that time but modified by later information forthcoming before the report was

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Responsibility

We consider our responsibility does not end when the contract is signed—It only begins then, and because CANNON YARNS are sold on a basis of QUALITY, and are the product of our own Mills, this responsibility is more than an idle promise.

This protection is worth the slight difference in cost.

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PHILADELPHIA

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Chattanooga

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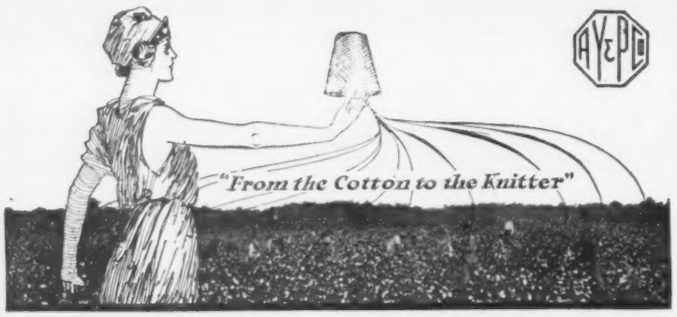

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Single Yarns

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And its special yarn products

WILLIAM WHITMAN COMPANY, Inc.

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CHICAGO
PHILADELPHIA
AMSTERDAM, N. Y.
CHARLOTTE, N. C.

Cotton Yarns—Continued

actually issued modifying the estimate quite extensively.

Warp twist yarns in the coarse counts and knitting yarns have been moving a little more freely but demand is still well below normal. The basis for 20s–2 carded warp seems to have become established at 33c or better.

Stock yarns of most counts are no longer available at concessions available prior to recent crop estimate. Dealers with stock yarns that show a profit are it is said passing on new inquiries to spinners who are of course more bullish in values under market conditions now prevailing. The upward trend however has not yet fully convinced buyers who still continue to follow a hand-to-mouth purchasing for immediate needs.

Stiffer Waste Market

Strip Stocks Decreasing with Output Declining

BOSTON.—The bullish crop estimate stiffened sentiment in the cotton waste market. No immediate lifting of waste prices, however, was possible. In spite of rather heavy accumulations of reworked, tinged, card, Egyptian and peeler strips holders are less down in the mouth and show more courage in refusing the absurdly low offers made by persons under the impression that the market is so demoralized that it is an easy matter to "steal" wastes. The best strips and the best comber are in a class with the best threads and all quite firm. Woolen mill call for good spinnable material is slightly on the increase. Low-grade spinnable and stuffing stocks are hard to move except at a sacrifice. Egyptian strips are quoted 9-10c and peeler strips 10½c. These quotations are nominal and sales are put through below and above these figures.

The cotton spinning industry for July showed a further recession in activity. A similar situation prevails in Great Britain where the consumption of American cotton has been irregularly declining since the first of the year. Active spindle hours in American mills based upon single shifts of 8.78 hours per day for July were 78.9%; June 88.4%; May 88.9%; April 98.2%; March 102.1%; February 102.8%. The general consumption of wastes has probably followed quite closely this steady decline in output of the spinning mills, and it may also be remarked that the production of wastes has fallen off in a similar ratio.

Spinners who use either cotton or its wastes, or both, desire more than anything else a steady market. Steadiness in the long run is even more desirable than cheapness, so it is said. There is a little of every kind of waste moving but prices remain nominal. In the Manchester cotton waste market there has been recently a slight tendency toward improvement but official crop estimates this month, the first bearish and the second bullish, have brought about further dislocation of business. There is no sign of immediate improvement either in the home trade or Continental business. Says an English authority: "With a carry-over of 6,000,000 bales the size of the present crop is not of very great importance; the main requirement for manufacturers and users is not necessarily cheap cotton but steady cotton."

Current Quotations

Peeler comber	13½—14c.
Peeler strips	10½—11c.
Egyptian comber	10½—11c.
Choice willowed fly	6 — 6½c.
Choice willowed picker	4½— 5c.
Sak. strips	16 —16½c.
Linters (mill run)	5 — 5½c.
Spoolers (single)	14 —14½c.
Fine White cop	12 —12½c.

Uses for Raw Cotton

(*Continued from page 68*)

about his product after he has grown it, but he should be impressed with the fact that he is simply a cog in the wheel of a great industrial machine. The report, if decided upon, will be used in connection with propaganda for better cotton through the Extension Service of the Department of Agriculture, the tentative survey being for the purpose of recommendation to the Government as to the character of cotton to grow.

Uses to Textile Trade

The corollary information which cooperative work in this investigation will make available to the selling trade can easily be appreciated. If selling agents today do not know the channels into which their goods go or the possible customers for their product, it is not likely that very much headway will be made in discovering new uses. As an illustration of this lack of knowledge, it is stated that a selling agent when asked who used his goods replied that the bleacheries used them. He did not attempt to go any further than this and was apparently satisfied to regard bleaching establishments as the consumers of his mill's output.

Investigations of this character have been made in other industries who have sought a remedy for unsatisfactory conditions. A parallel is cited in the case of the Copper and Brass Research Bureau. This industry awoke one day to the realization that their product was being replaced by other materials and determined to embark upon a campaign of research to discover legitimate uses for their material. They gathered together a mass of information which was used effectively in demonstrating to the public that copper was the best and most durable material and in the end the cheapest for use in connection with building construction, with the result that there was a revival in demand all over the country. It is the hope of those who are interested in this investigation that results will be equally satisfactory and appealing to the trade as well as to the ultimate consumer.

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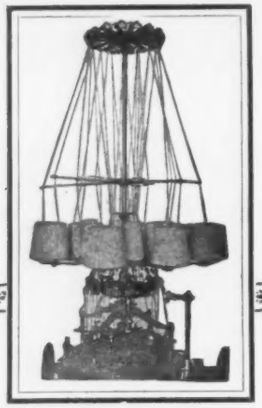

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NEW BRUNSWICK, N. J.

COTTON

Cotton Market Waits Crop Report

Better Weather in the South Promotes Liquidation, but Prices Hold Between 17½ and 18c Levels

TRADING in the cotton market preceding the Labor Day adjournment was pretty much confined to the routine hedging operations which have not yet attained any volume of consequence owing to the lateness of the movement and the evening up of speculative accounts in preparation for next Wednesday's Government report. While not without points of criticism, weather conditions were more favorable after the rains of the previous week and this combined with the extent of recent advances found its reflection in more or less liquidation of long accounts and moderate reactions in prices. December contracts which had sold up to 18.12 on Aug. 26, broke to 17.47 on Monday, rallied back to nearly the 18c level but met increased offerings above 17.90 and later fluctuations were irregular.

The Government report scheduled for publication next Wednesday will give the condition of the crop as of Sept. 1 and the indicated yield. Private reports so far issued have shown an end-August condition ranging from about 57.5 up to 60.3% and crop indications running from 14,380,000 bales up to 15,153,000. These figures did not seem to have caused any crystalization of sentiment as to the probable showing of the Government's report so far as indicated by the character of the trading up to the close of last Wednesday, and the disposition to even up before Labor Day was promoted not only by the uncertainty of the Government report but by the uncertainty of weather developments over the holidays. The general expectation appeared to be that the improvement in the weather came too late in August to show in the Sept. 1 figures of the Government and that the crop indication will show a falling off to about 15,000,000 bales or possibly 14,800,000.

A lint crop of 14,800,000 bales, would, of course, more than equal last year's world's consumption, but if the indication by Sept. 1 has actually dropped to that figure, the fear of further deterioration during September will have to be reckoned with. The impression is that the first half of September in relation to crop developments this year is almost equivalent to the last half of August in a normal season, and that the next three or four weeks may be considered very critical ones for the crop. Moreover, the fear of damage does not altogether disappear until the date of killing frost has been established, and bullish sentiment based originally on reported deterioration in American crop prospects, has been intensified during this past week by unfavorable crop reports from Egypt. According to private cables the new crop of Sakellaradis will probably be 20% short of last year's.

The following table shows Wednesday's closing quotations in the leading spot market of the country with the usual comparisons:

Market	Aug. 25	Sept. 1	Chge.	Last Yr.	Sales
Galveston	18.55	18.15	—40	22.35	3,644
New Orleans	18.56	18.00	—56	21.73	10,952
Mobile	17.75	17.45	—30	21.50	396
Savannah	18.06	17.77	—29	21.73	3,530
Norfolk	18.25	18.00	—25	22.00	1,253
New York	19.20	18.90	—30	22.60	584
Augusta	17.75	17.50	—25	21.69	1,767
Memphis	18.25	18.25	....	22.00	7,800
St Louis	18.25	18.25	....	23.00	....
Houston	18.50	18.05	—20	22.10	43,962
Dallas	17.95	17.45	—50	22.05	48,042

The following differences on and off middlings are given as compiled from the reports received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract.

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F	1.25†	1.25†	1.05†	.83†	1.05†
S. G. M	1.00†	1.00†	.90†	.68†	.83†
G. M	.75†	.75†	.75†	.53†	.62†
S. M	.50†	.50†	.50†	.38†	.44†
S. L. M	1.25*	1.50*	1.25*	1.25*	1.28*
L. M	3.25*	3.50*	3.50*	3.00*	3.38*
S. G. O.**	5.25*	6.00*	5.50*	4.50*	5.43*
G. O	6.50*	7.50*	7.00*	6.00*	6.98*
YELLOW TINGED					
G. M	.75*	1.00*	.50*	.50*	.75*
S. M	1.00*	1.50*	1.00*	1.00*	1.22*
M.**	2.50*	3.00*	2.50*	2.50*	2.75*
S. L. M.**	4.00*	4.50*	4.00*	4.00*	4.53*
L. M.**	6.00*	6.50*	5.50*	5.50*	6.20*
YELLOW STAINED					
G. M	2.25*	3.00*	2.00*	2.00*	2.31*
S. M.**	2.75*	3.50*	2.50*	2.50*	2.88*
M.**	4.00*	4.00*	3.25*	3.25	3.70*
BLUE STAINED					
G. M.*	2.50*	3.00*	2.00*	2.00*	2.28*
S. M.**	3.00*	3.50*	2.75*	2.75*	3.06*
M.**	4.00*	4.00*	3.75*	3.75*	4.05*

*Off middling. † Middling.

COTTON STATISTICAL DATA
(Fluctuations of Futures)

	Closed Aug. 26	For Week High	For Week Low	Closed Sept. 1	Ch'ge
September	17.96	18.08	17.75	17.81	— .15
October	17.80	18.18	17.45	17.74	— .06
November	17.80	17.90	17.66	17.76	— .04
December	17.75	18.12	17.47	17.78	+ .03
January	17.78	18.12	17.53	17.83	+ .05
February	17.83	18.10	17.79	17.98	+ .15
March	17.93	18.26	17.75	18.04	+ .11
April	17.98	18.26	17.88	18.13	+ .15
May	18.03	18.35	17.85	18.22	+ .19
June	17.93	18.25	17.93	18.13	+ .20
July	17.90	18.20	17.78	18.05	+ .15

SPOT FLUCTUATIONS FOR WEEK
(Middling)

	New York	New Orleans	Liverpool
Friday, Aug. 27	19.05c	18.29c	10.17d
Saturday, Aug. 28	18.95c	18.00c	10.18d
Monday, Aug. 30	18.90c	17.97c	10.26d
Tuesday, Aug. 31	19.05c	18.12c	10.17d
Wednesday, Sept. 1	18.90c	18.00c	10.23d
Thursday, Sept. 2	18.75c	17.83c	10.14d

SPOT FLUCTUATIONS AND STOCKS

	Prices Sept. 1	Stocks This week	Stocks Last year
Galveston	18.15	134,942	76,650
New Orleans	18.00	122,294	95,924
Mobile	17.45	3,222	9,720
Savannah	17.77	38,878	61,919
Charleston	....	12,825	15,857
Wilmington	....	4,615	7,192
Norfolk	18.00	32,649	12,079
Baltimore	18.45	500	532
Augusta	17.50	29,715	22,471
Memphis	18.25	121,714	9,497
St Louis	18.25	191,951	985
Houston	18.05	11,774	172,789
Little Rock	18.00	28,417	2,906

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Ply Yarns our Specialty.
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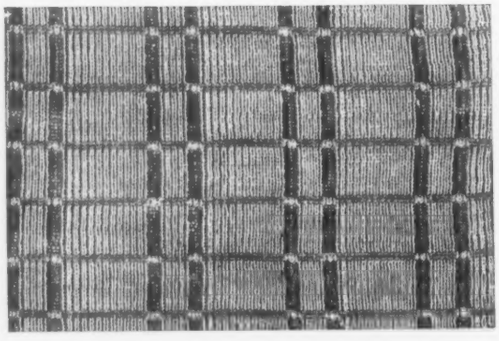

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Cotton—Continued

Cotton Trade Still Slow

Prices in Memphis Only Slightly Higher in Last 10 Days

MEMPHIS, TENN., AUG. 30.—While cotton shippers here had hoped to be developing some forward business by this time they are as yet making no aggressive effort. Those who have booked some business are getting nervous over it. Everyone here is impressed with the idea that the crop has deteriorated sharply since Aug. 16, the date of the recent report by the Government. This has improved the position of old crops, but has discouraged operations in new crops. Low grades, of staple character, are selling at 10 to 13c., the price prevailing during recent weeks; some are asking from ¼ to ½c., above prices obtainable before the Government report, but while the tone is firm the average of prices paid is only slightly higher.

Quotations on the better grade staples are nominal both because of scarcity and lack of demand. Much more business could be developed but for differences in ideas as to basis. Spinners show no inclination to buy ahead except at very low basis, attributed here to their belief that a crop of 15,500,000 bales or more is not improbable; shippers who, more than once in recent years have suffered because of over-anxiety for forward bookings, and consequently low basis, early in the season, are offering at basis which makes some allowance for a smaller crop than expected and for possible injury to its quality. Most of the f. o. b. business during the week was of hedged low grades; low grade prices did not follow the advance in contracts and the widening of differences resulted in losses to owners.

Last year at this time cotton had begun to move in this territory; owing to the lateness of the crop, it will be two or three weeks before picking becomes general. Weather conditions were mixed, but toward the end of the week were more favorable than otherwise. Temperatures were unseasonably low in some sections but did no harm. Rains were not needed anywhere and were detrimental in most sections where they occurred. Deterioration seems to be about checked, but no improvement is apparent and worms continue active and some new invasions are reported. Weevils are becoming more active and some alarm is warranted as to weevil possibilities during the next two or three weeks; there has been some severe damage in some localities, but damage is surprisingly light considering the belt as a whole.

Market Statistics

Basis Middling

	Saturday, Aug. 28	Saturday, Aug. 21
10 markets average	17.98	17.21
Memphis	18.25	17.50

Premium Staples

First Sales from Factors Tables at Memphis
Grade Strict Middling. Prices Nominal.

1⅛-in.	22 @22¾c.
1 3/16-in.	23¼@24c.
1¼-in.	27 @29c.

Current Sales

	For week	Prev. week	Week before
Memphis total	9,950	11,230	5,075
F. o. b. included	8,450	9,150	3,900
10 markets	76,910	71,279	46,130

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Net receipts	326	593	362
Gross receipts	9,847	2,864	3,832
Total since Aug. 1, net	3,578	1,822	948
Shipments	18,175	2,798	6,119
Total since Aug. 1	68,821	9,495	22,298
Total stock	125,854	8,218	23,172
Decrease for week	8,328	*66	2,287
Unsold stock in hands of Memphis factors	45,500	2,200	.....

* Increase.

Egyptians Advance Sharply

Domestic Staples Firm—Egyptian Futures Advance

BOSTON.—The feature of the market this week in staple cottons has been the rather unusual rapid upward reaction indicated by closing prices in Alexandria amounting to $3.25 on November Sak. Spot stocks of Egyptians also showed a good sized advance. The various grades of middling and strict middling were however unchanged from previous week. Mill demand is not particularly energetic in view of the uncertainty still obscuring the crop situation.

Current Quotations

Average prices for Sept.-Oct. shipments of middling and strict middling hard western cottons (Government lengths) are as follows:

	Middling	St. Middling
1 1/16 in.	20½to21½c.	21½to22c.
1 1/16 in. to ⅛ in.	21½to22½c.	22½to23c.
1 ⅛ in.	22½to23½c.	23½to24½c.
1 3/16 in.	24½to25½c.	25½to26½c.
1 ¼ in.	29 to30c.	30 to33c.

Basis on N. Y. Dec. 17.78c.

John Malloch & Co., Boston quote Egyptian cotton, c. i. f. Boston for Sept.-Oct. shipment as follows: Medium Sakellarides 32¼c up 1¾c, Medium Uppers, 24½c up 1¼c from Aug. 25. They report closing prices Sept. 1 on the Alexandria exchange as follows: Oct. Uppers $23.02 up $1.79; Nov. Sak. $32.45 up $3.25 from Aug. 25.

Foresees Another Low Grade Cotton Crop in Texas

The following telegram has been received from James McDowell, the well known cotton authority: "San Antonio, Tex, Aug. 31.—Just finished a trip all over the Valley and stopped at most of the gins. Too much rain in this section. Looks like another low grade crop. The Valley has ginned 80% of its crop already. Paris section of Texas has had a hail storm and will make only about one bale in 15 acres. Insect damage very bad, some fields without a leaf on the plant."

BERWICK, PA. The silk mill of Baer Co., here is working full capacity, day and night shifts, with indications the plant will be operated on this basis for some time to come. More than 150 are employed.

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YARNS

OF EVERY DESCRIPTION

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WEBSTER, MASS.

Spinners of

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WORSTED YARNS

Tops and Noils Slow

Prices for Both Sorts Steady but Little New Business

BOSTON.—The top market continues very inactive but believes quite firmly that larger business will appear shortly after the holiday. The New York goods market has been more responsive to the recent showings and this in the long run will bring in business for the commission combers, who are sadly in need of it. During the week there has been little interest in the finer grades of men's wear at unchanged prices, also in the medium grades for knitters. Low tops have been neglected. The Bradford market holds strong with advances of a half penny per pound in 3/8s blood and 1/4 blood tops.

The noil market is in the doldrums. There is no sign of any immediate improvement. A little spotty buying is coming in from the mills for most of the white grades. Colored noils and specialty noils are quite inactive. Prices are running neck and neck with similar grades of worsted threads. Some traders say that it has been possible of late to displace certain reworked materials by lines of threads and noils. Output of noils is not on the increase. The production of noils by the large mills who carry wool right along from the fleece to the fabric continues steady. At the beginning of the week 22 bales of wool noils arrived to order.

The Bradford market in August has witnessed an improvement. Topmakers quoted higher prices on noils although the volume of business hardly seemed to warrant any advances. Quotations are stiffer and it is no longer a distinctively buyer's market. Adding 1c for freight and 19c for duty the following quotations represent the Bradford market from the American importer's standpoint: choice fine noils 82c; average fine noils, 78c; half-blood 74c; 3/8s blood 65c; 1/4 blood 53c; 46s, 47c; 40s, 43c.

Top and Noil Quotations

Fine	(64–66s)	$1.35–$1.37
Super 64s Aus.		1.54– 1.55
Half-blood	(60–62s)	1.25– 1.21
High ⅜ blood	(58s)	1.12– 1.15
Aver. ⅜ blood	(56s)	1.07– 1.08
Low ⅜ blood	(52–56s)	1.00– 1.02
High ¼ blood	(50s)	.95– .96
46s		.88– .90
44s		.83– .85
40s		.80– .81
36s		.80– .81
Tops—Bradford		
Fine	(70s)	54 d
Fine	(64s)	51 d
Half-blood	(60s)	45 d
Three-eighths blood	(56s)	33 d
Quarter-blood	(50s)	26 d
Cross bred	(46s)	21½d
Noils—Boston		
Fine		$.80– $.83
Half-blood		.73– .75
High ⅜ blood		.65– .70
Aver. ⅜ blood		.60– .65
Low ⅜ blood		.55– .60
High ¼ blood		.53– .55
46s		.50– .51
44s		.48– .50
40s		.47– .49

Is Worsted Trade Too Liquid?

Spurt in Fall Buying Catching Many Mills Unprepared—Hand-to-Mouth Buying Blamed

PHILADELPHIA.

THE worsted yarn market at this time is an excellent example of the effects of hand-to-mouth buying about which the textile and other industries have heard so much within recent years and which it must be admitted many factors in the yarn trade do not, as yet, endorse wholeheartedly. One of the outstanding developments which has come into more prominence the last two weeks has been the unexpected receipt of a fair volume of duplicate heavy-weight goods orders by men's wear manufacturers. Manufacturers of these lines had felt the possibility of receiving such orders this late in the season was practically nil and they were therefore beginning to look ahead, with a certain measure of anxiety, toward the new light-weight season just opened.

Some Business Lost

This is a concrete example of the effect of hand-to-mouth buying in men's wear, as formerly such orders would have been on the mill's books several months earlier. While opinion seems fairly equally divided between the advantages and disadvantages of hand-to-mouth buying of yarn a number of spinners believing this condition is here to stay, have endeavored to arrange their own affairs accordingly. A different aspect, however, is found among weavers who have been compelled to turn down business because they were unable to meet delivery specifications set by their customers who in turn are unable to grant delivery extensions due to the lateness in the season. Mills who early this season were begging for orders now see drastic hand-to-mouth buying resulting in a situation whereby they are compelled to turn down possible business simply because their customers would not operate ahead, even conservatively, at the proper time.

Fall Spurt Here

Whether such a condition will have any effect upon buying in the future, causing a slightly freer movement earlier in the season is doubtful. Manufacturers state they experienced similar conditions last year and they look for disadvantages of it to again be forgotten by next year. Spinners now report a spurt in buying of yarns for immediate delivery heavy-weight fabrics, sweaters and jersey cloth, and unless the spinner or yarn dealer has the exact yarn the manufacturer needs in his stock the order is lost. This is now the most important requisite as the jobber or retailer has given the manufacturer the order only on condition the goods were shipped promptly. As a result spinners who have catered to hand-to-mouth buying and dealers who carry a stock of all counts have experienced a run of fair to good business the last two weeks, which knitting yarn spinners believe will continue until November, as was true last year.

Hand-to-Mouth Disadvantages

The trade is beginning to speculate whether at least a number of advantages from hand-to-mouth buying, such as limiting risks in a falling commodity market, lessening the dangers of cancellation of orders and a more stable price level, have not been offset, so far as the spinner is concerned, to a large degree by the fact that they are now compelled to work so quickly on orders within a short time, which results possibly in the production of a less perfect yarn besides prohibiting the spinner in many instances from buying his wool most advantageously. In other words instead of this fall business being spread over a longer period of time, buying has come into the market from several sections and as a result an artificial situation is created which may last until late in the fall, after which demand, as occurred last year, may again disappear.

Irrespective of the advantages of hand-to-mouth buying of yarns, spinners find the condition facing them is an actual one and not a theory, and a majority have in fact endeavored to adjust their plants to the new condition they are forced to meet. That this is true is indicated by reports spinners make at intervals regarding the size of stocks of yarn held by them. Latest statistics indicate a steady reduction in such stocks, the latest being the most favorable from the spinners' viewpoint in this regard.

A similar condition is found in stocks of yarns held by manufacturers who have been buying only to fill orders already on their books. Mills have been unwilling to accumulate either yarns or goods and as a rule are liquid from wool to finished goods, all this being the results of hand-to-mouth buying occurring at the same time a falling commodity market was apparent.

Optimistic Outlook Possible

Now with several manufacturers finding it necessary to pass up business because they are unable to meet delivery requirements of buyers, several are asking, if the trade has not become more than liquid and in fact has not been operating too conservatively so that considerable business may be lost this fall by worsted manufacturers as a result of the trade not following a more confident merchandising policy.

In other words they are asking themselves, have we not been too pessimistic, without any confidence whatever in the future and thereby have placed ourselves in a position where we are unable to take full advantage of the present belated interest from buyers—the off-spring of hand-to-mouth buying. Certainly, many in the trade assert, the stability in wool and yarns during recent months has been such as to instill more confidence in the most pessimistic and possibly to warrant more confidence in the outlook by the entire trade so that the disadvantages of hand-to-mouth buying, about which many are complaining, may not be felt so keenly.

WORSTED YARN QUOTATIONS

(Corrected to Close of Business Wednesday)

Bradford System

2-12s, low com. (36s)	1.05–1.10
2-16s, low com. (36–40s)	1.10–1.15
2-20s to 2-24s, low ⅜ (44s)	1.15–1.20
2-20s to 2-26s, ⅛ bld. (46–48s)	1.25–1.30
2-26s to 2-30s, ¼ bld. (48s)	1.30–1.35
2-30s to 2-32s, ¼ bld. S. A. (46s)	1.35–1.40
2-32s, ¼ bld. (48–50s)	1.40–1.45
2-20s, ⅜ bld. (56s)	1.45–1.50
2-26s, ⅜ bld. (56s)	1.50–1.55
2-36s, ⅜ bld. (56s)	1.55–1.60
2-32s, ½ bld. (60s)	1.70–1.75
2-36s, ½ bld. (60s)	1.75–1.80
2-40s, ½ bld. (60–64s)	1.80–1.85
2-50s, high ½ bld. (64s)	1.95–2.00
2-50s, fine, (66–70s)	2.00–2.05
2-60s, fine (70s)	2.65–2.75

French System

20s, ¼ bld. (48s)	1.40–1.45
20s, high ¼ bld. (50s)	1.50–1.55
20s, ⅜ bld. (56s)	1.55–1.60
30s, ⅜ bld. (56s)	1.65–1.70
30s, ½ bld. (60s)	1.80–1.85
40s, ½ bld. (60–64s)	1.90–1.95
50s, (66–70s)	2.15–2.20
60s, (70s)	2.65–2.70

Knitting Yarns in Oil (Bradford)

2-20s, low ¼ bld. (44s)	1.15–1.20
2-18s to 2-20s ¼ bld. (50s)	1.25–1.30
2-26s, ¼ bld. (50s)	1.30–1.35
2-30s, ¼ bld. (50s)	1.35–1.40
2-20s, ⅜ bld. (56s)	1.50–1.55
2-20s, ½ bld. (60s)	1.75–1.80

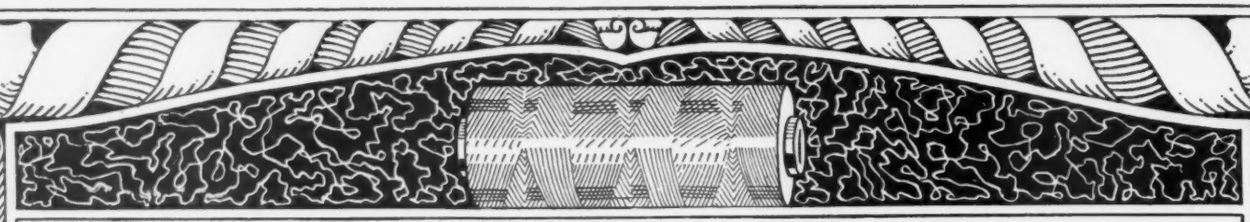
French Spun Merino White

30s, 50–50	1.50–1.55
30s, 60–40	1.60–1.65
30s, 70–30	1.70–1.75
30s, 80–20	1.80–1.85

Yarns More Hopeful

Higher Prices Difficult—Worsted Spindles at Low of Year

BOSTON.—There is a better feeling in the worsted yarn market and both French and Bradford yarns are meeting more inquiries with the probability of business in volume in the near future. A lot of sampling has



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Worsted Yarns—Continued

been done and the goods market seems to be exhibiting a more favorable reaction to the lines already shown. There is buying of hosiery and sweater yarns and some fairly good sized business has been done in French spun yarns, at quite low prices it is reported. The general price level of the market continues unsatisfactory and there seems little reason at the moment to anticipate any easing off in values either of wool or tops. Machinery statistics just available indicate that worsted spindle activity in July was at the low point of the year; the same also was true of woolen spindles. Worsted spindles however were approximately 2% more active than in July 1925 but woolen spindles were off approximately 13%. The following table gives percentage activity in worsted and woolen spindles based upon 100 as being single shift capacity activity:

	Worsted	Woolen
January	71.2	72.3
February	75.4	69.6
March	69.7	73.4
April	62.3	71.6
May	57.2	71.4
June	59.1	71.1
July	55.7	65.9
July 1925	53.9	78.6

In the Bradford market there is more business being placed but spinners are not able to make advances corresponding to the higher prices of tops. In all qualities of yarns however the tendency is against the buyer.

BRADFORD YARN PRICES

	s	d
2-16s, 36s	2	1
2-24s, 44s	2	3
2-36s, 58s	4	3
2-48s, 64s	5	6
2-60s, 70s	6	7

Ring Roving in Drawing

(*Continued from page 74*)

tion in contiguous layers due to the rising and falling of the ring rail, or rather, to its approach to and recession from the point of delivery. This is so slight in amount that it has not been thought worth while to include its effects in the examples given. However, with this in mind, ring rails should be run as slowly as possible consistent with making bobbins of good appearance.

Effect in Conditioning

The twist variation in ring rovings, though slight, needs consideration from the roving "conditioning" or "cellaring" point of view. All rovings, from whatever quality of material they are made, spin better if they are allowed a period of rest between roving and spinning. Such rest periods allow the stresses and strains imposed on the fibers in drawing to balance, and consequently the roving drafts more naturally and regularly in the spinning frame. The best spinning results accrue if the whole length of the roving is conditioned uniformly. The ring system — which makes the outside layers harder in twist than those inside — sets up conditions absolutely opposite to that which would be required in a perfect system.

A further consideration demanding that the twist imposed on ring roving should be kept to absolute minimum is that twist in roving passes into the yarn. As a consequence, yarn spun from full rovings will be slightly different from twist in yarn spun from nearly empty rovings. Not much testing of yarn for twist and strength is necessary to demonstrate this point, or it may be tested in a frame, one side of which is spinning from full bobbins and the other from bobbins nearly empty.

While departures from exactitude in twist may be small and in many cases unimportant, they should frequently be in the minds of spinners, as it will sometimes be advisable to use ring rovers for special yarns.

July Wool Consumption

WASHINGTON, D. C.—The Department of Commerce has announced statistics on the consumption of wool, by manufacturers in the United States during July, based on reports received from 523 manufacturers operating 589 mills. The reporting mills which are included in this report are equipped with 53,973 looms, 4,988 sets of woolen cards, 2,117 worsted combs, and 3,490,521 spindles. This is exclusive of 20 manufacturers operating 72 mills, who failed to report for this month. These non-reporting mills are equipped with about 13,231 looms, 1,428 sets of woolen cards, 539 worsted combs, and 997,406 spindles.

The total quantity of wool entering into manufacture in July as reported reduced to a grease equivalent was 38,235,717 lbs. as compared with 38,249,220 lbs. for June, 1926; and 40,780,856 lbs. for July, 1925. The monthly consumption of wool (pounds) in grease equivalent for manufacturers reporting for 1926 was as follows: January, 41,446,171; February, 40,491,996; March, 43,931,596; April, 40,093,383; May 36,236,741. The consumption shown for July, 1926, included 25,528,182 lbs. in the grease; 4,741,709 lbs. of scoured wool; and 2,418,088 lbs. of pulled wool.

The following table shows the total quantities of wool consumed, classified according to grade:

Class and grade	Total for July, 1926	Total Jan. to July incl. 1926	1925
Total	32,687,979	238,429,781	259,303,889
Domestic	16,764,948	98,874,254	116,989,996
Foreign	15,923,031	139,555,527	142,313,893
Combing[1]	20,160,257	132,647,920	129,402,501
Clothing[1]	5,437,425	40,537,171	47,646,813
Fine, total	7,516,650	52,181,654	57,969,184
½-Blood, total	3,919,035	28,386,483	27,612,884
⅜-Blood, total	5,350,652	37,893,169	39,069,263
¼-Blood, total	6,265,417	40,486,320	39,346,193
Low ¼-Blood	1,778,051	8,743,892	8,063,056
Common, total[2]	62,346	627,841	1,126,961
Braid, total[2]	36,326	375,696	242,840
Lincoln, total[2]	669,205	4,490,036	3,618,933
Carpet, total[2]	7,090,297	65,244,690	82,254,575
Total, reduced to grease equiv[4]	38,235,717	278,684,824	304,193,690
Domestic	20,605,481	125,601,925	147,790,237
Foreign	17,630,236	153,082,899	156,403,453

[1] Exclusive of carpet wools.
[2] All domestic.
[3] All foreign.
[4] In computing the grease equivalent, 1 pound of scoured wool is considered equivalent to 2 pounds in the grease; and 1 pound of pulled, to 1½ pounds in the grease.

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RAYON AND SILK YARNS

Rayon Market Has Pre-Holiday Aspect

Fair Day-to-Day Business Being Placed, Say Producers—Importers Note Improvement

Some sellers were inclined to scout the possibility that the near approach of the Labor Day holidays could have much effect on rayon but generally through the market some let-down was observed. Business was still on a day to day basis and few reports were heard of any large contracts. Naturally everyone takes the Saturday before Labor Day as a holiday.

Sales during August have been reported as highly satisfactory in some representative quarters. "Highly satisfactory" is of course a relative term and may mean almost anything. What it is taken to mean is that business was more active than producers counted upon and that gains were shown over July. Signs point to renewed activity on a heavy scale shortly on the part of hosiery buyers which will supplement the satisfactory operations of the knit underwear mills.

Importers were slightly more optimistic last week. A bulletin issued by the Rayon Group of the National Council of American Importers and Traders pointed out that prices for foreign yarn were now low enough to compete with the domestic yarn. They were advised moreover to combat propaganda with propaganda and to systematize their selling so as to make the best possible use of the vast market existing here. With regard to the price element mentioned by the bulletin, it is a fact that one or two importers are somewhat lower than they would like to be. One importer who is selling A quality 150 denier for $1.45 set his price at this level only because he thought, in common with many others that the Viscose Co. would set their price at $1.55. He wished to be 10c under and found when the prices were published that the Viscose Co.'s price was $1.65 and that he was 20c under. Having set his limits he hesitated to raise them.

Spun Silk Quiet

Market Lacks Animation as Buyers Hold Off on Spring Business

The spun silk market was again very quiet last week but prices held unchanged. Sellers look for a period of quiet now that may last for several weeks to a month or more. Spring business is still being held in abeyance due partly to the presence of stocks of the broadcloths held over from the previous season and partly to the uncertainty regarding prices.

Prices are as follows:

[illegible]-2	$5 75	30-2	$5 25
[illegible]-2	5 60	20-2	5 00
[illegible]-2	5 50	60-1	4 65

Italian Rayon Industry's Growth

Production Increases 200% in Two Years—Exports Trebled During Same Period—One Concern Accounts for 70% of Total

ITALIAN production of rayon has mounted from a total of about 10,000,000 lbs. in 1923 to 18,500,000 in 1924 and to 30,000,000 in 1925—an increase of 200% within the last two years, according to the Textile Division, Department of Commerce. World production of rayon in 1925 has been estimated by authorities in the trade at 185,000,000 lbs., of which figure Italy's share would be 16.25%.

U. S. Leads World Production

In 1925 the United States led the world in rayon production with an output of 51,792,000 lbs., while England and Italy contended for second place. In 1923 and 1924, Italy ranked fourth, having been exceeded in production by England and Germany. The leaders in the Italian industry are reported to be planning further expansion, both at home and abroad, in the current year.

At the close of 1925, Italy had 18 rayon concerns owning 23 plants (15 of which were still under construction) and having a total capitalization slightly in excess of 1,700,000,000 lire (lire = approximately $0.04 at average exchange in 1925). Seven of these companies were organized in 1925, while other concerns increased their capitalization. Of the aforementioned 16 concerns, "Snia-Viscosa" (Societe Nazionale Industria Applicaziono Viscosa) of Turin is the largest, its output accounting for about 70% of the national production of rayon. "La Soie de Chatillon" is generally conceded in Italy to be the second largest producer, followed by the "Societa Generale Italiana della Viscosa" and "Seta Artificiale Varedo." Of these four concerns, the first two have published their production figures for 1924 and 1925.

Snia-Viscosa's Production

Snia Viscosa's production of rayon reached approximately 21,000,000 lbs. in 1925 compared with 11,700,000 in 1924, 6,600,000 in 1923, and 1,200,000 in 1920, according to the company's annual report. The company's plants are located at Turin and Pavia; in addition, Snia Viscosa controls the mill of the Societe Italiana Seta Artificiale at Cesano Maderno and of the Unione Italiana Fabbriche Viscosa at Venaria Reale. In 1925 Snia Viscosa increased its capitalization from 600,000,000 lire to 1,000,000,000, its shares (par value 200 lire) having been sold on exchanges in both London and New York.

Chatillon's Production

La Soie de Chatillon was organized in 1918, but it did not begin production until 1921. Its capitalization has increased from 15,000,000 lire in 1921 to 150,000,000 in 1925, employes from 900 to 8,000, and production from 87,000 lbs. to 6,300,000, according to the company's annual report.

In October, 1925, the Snia Viscosa introduced a new staple "Sniafil," a substitute for wool which may be used alone or mixed with other fibers. Early in 1926, La Soie de Chatillon produced a fiber "Chatilaine" for mixing with wool and also an artificial schappe "Seris" for mixing with silk, wool or cotton.

One important factor in the development, of the Italian rayon industry at present is said to be the lower labor costs in that country as compared with Germany, France, England or the United States. The fact that caustic soda, sulphuric and nitric acids are obtainable locally also aids in keeping production costs down.

The Italian rayon industry gives employment to between 30,000 and 35,000 workers, of which Snia Viscosa is credited with 20,000. This company had expected to need about 25,000 people when its new plants should be completed in 1926, but recent cable advices to the Commerce Department from Assistant Commercial Attache A. A. Osborne, Rome, indicate that Snia Viscosa has been discharging a large number of employes.

Gains in Rayon Exports

Italian exports of rayon have trebled within the last two years. In 1923 Italy exported 2,325,968 kilos (kilo = 2.2046 lbs.) of rayon valued at 154,404,000 lire; in 1924, it shipped 4,582,786 kilos with a value of 299,640,000 lire; and in 1925, it exported 7,259,863 kilos (more than three times the 1923 quantity) of rayon worth 473,441,000 lire. The exchange value of the lire averaged $0.046 in 1923, $0.044 in 1924, and $0.04 in 1925. Great Britain and the United States are Italy's best markets for rayon, the former having taken approximately 28% of the total exports in 1925 while the latter is credited with about 20%.

The outstanding feature of the Italian export trade in rayon in 1925 is the enormous increase in shipments to the United States which rose from 106,962 kilos in 1924 to 1,483,919 in 1925. Germany likewise bought a much larger quantity of Italian rayon in 1925 than in 1924. British purchases in 1925 exceeded those of 1924 by over 25%, despite the fact that the United Kingdom levied a duty of 33⅓% effective July 1, 1925. British import statistics for 1925, however, indicate that the great bulk of these importations were made prior to the imposition of the duty in Great Britain.

Italian Rayon in India

Italy has been considerably expanding its sales of rayon in British India and China. In 1925, Italy superseded Great Britain as the leading supplier of rayon to British India, according to British press reports.

Italian imports of rayon amounted to 583,243 kilos, valued at 44,031,307 lire, in 1925, compared with 607,438 kilos with a value of 54,218,325 lire in 1924 and 508,468 kilos worth 46,715,748 in 1923. Belgium is the principal source of these imports, having supplied 399,313 kilos in 1925 compared with 382,891 in 1924 and 431,706 in 1923. Switzerland ranked second in 1924 and 1925, having furnished 75,692 kilos in 1924 and 119,731 in 1925; in 1923 its share (3,291 kilos) was exceeded by the imports from both Germany and France which amounted to 5,426 kilos and 3,370 kilos, respectively.

DOMESTIC RAYON PRICES

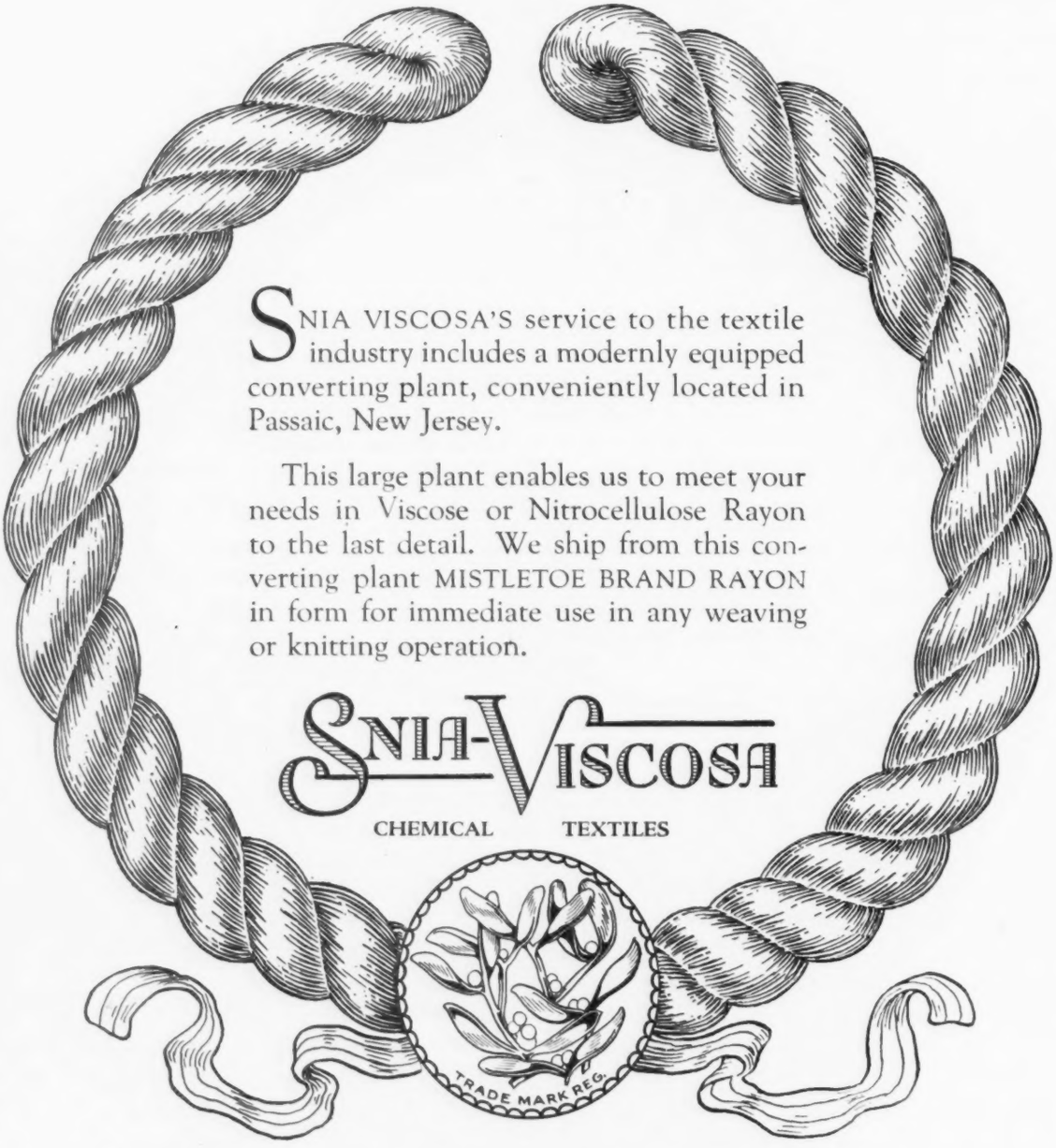
Denier	"A"	"B"	"C"
55	$2.55	$2.40	$2.25
65	2.45	2.30	2.15
75	2.35–2.50	2.20–2.35	2.05–2.20
80*	2.50	....	....
85	2.25	2.10	1.95
95	2.05	1.90	1.75
100	2.00 2.15	1.85–2.00	1.70–1.95
100*	2.35	....	....
110	1.95	1.80	1.65
120	1.90	1.75	1.60
125	2.00	1.85	1.70
130	1.85	1.70	1.55
140	1.75	1.60	1.45
150	1.65	1.50	1.35
150*	1.80	....	....
170	1.55	....	....
170*	1.75	....	....
175	1.60	1.45	1.30
200	1.55–1.60	1.45	1.30
200*	1.70	....	....
250	1.50	1.40	1.25
300	1.50	1.40	1.25
450	1.35–1.45	1.35	1.20
600	1.45	1.35	1.20
900	1.35	....	....

* Super extra.

CELANESE

45	$4 25
75	3 75
100	3 65
120	3 50
150	2 90
170	2 85
200	2 75
250	2 70
300	2 70

A Modern Rayon Converting Plant at Passaic, N. J.



SNIA VISCOSA'S service to the textile industry includes a modernly equipped converting plant, conveniently located in Passaic, New Jersey.

This large plant enables us to meet your needs in Viscose or Nitrocellulose Rayon to the last detail. We ship from this converting plant MISTLETOE BRAND RAYON in form for immediate use in any weaving or knitting operation.

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CHEMICAL TEXTILES

TRADE MARK REG.

COMMERCIAL FIBRE CO. *of America, Inc.*

General Offices: 15 East 26th St., New York City *Converting Mills:* Passaic, N. J.

TELEPHONE: ASHLAND 9150

REPRESENTATIVES:

Wm. G. Burke, Reading, Pa. Walter Schmaedig, Philadelphia, Pa. Geo. J. Loerzel, Chicago, Ill.
Wm. Wulfers, Providence, R. I. H. T. Cosby, Charlotte, N. C. and Chattanooga, Tenn.
Commercial Trading Corporation, Ltd., Toronto, Can.

Rayon and Silk Yarns—Continued

Thrown Silk Firm

Prices Advanced 10c a Pound to Take Into Account Higher Raws

The thrown silk market appeared to be slightly quieter last week due possibly to the fact that many buyers were desirous of holding off until after Labor Day. The additional fact that prices were advanced generally throughout the market 10c a pound may also have had something to do with the reluctance to place additional business. In one or two directions though buyers were operating. Six thread was again in demand despite the caution that is beginning to be manifested regarding the Canton numbers. New business for sizable quantities was placed and sample lots were also requested indicating that confidence is felt in certain quarters. Three thread georgette was another construction that noted good buying.

Canton tram both 14/16 and 20/22 was quiet. Cotton buyers are uncertain when they will again operate despite the rather attractive prices quoted. Tussah was also quiet. Prices are as follows:

(60 days basis)

Japan Organzine, 2 thd Grand Double Extra in skeins	$7 60
Japan Tram, 3 and 4 thd in skeins	6 70
Japan Tram, 5 thd on cones	6 60
Japan Crepe, 3 thd on bobbins, 65 turns	7 30
Japan Crepe, 2 thd XXX on bobbins, 70 turns	7 85
Canton Crepe, N S 14/16, 3 thd on bobbins	6 25
Tussah Tram, 2 end on cops	3 60

Raw Silk Higher

Buying Quiets Down, but Prices Hold Firmly at Top

The raw market advanced into new high ground last week with Best No. 1/X above $6.00 and Cracks above $6.30. This compares with levels some 20c a pound lower at which certain importers solicited business and it is believed, were successful in accumulating quite a volume. Covering against short contracts in Yokohama appeared to be responsible for the rise. In New York few manufacturers were willing to follow the up and this fact together with the approach of the Labor Day holidays was the cause of rather quiet conditions through the greater part of the week.

Yellow warp sizes continued to sell at 35c a pound discount from 13/15. This condition is now accepted as the regular thing and buyers look for no early rally in the yellow silks. At the same time many are taking advantage of the differential to switch into yellows which in the long run should aid their prices. Canton silks were quiet.

(90 days basis)

Japan Filature, Grand Double Extra	13/15	$6 55
Japan Filature, Crack Double Extra	13/15	6 35
Japan Filature, Double Extra	13/15	6 20
Japan Filature, Best X	13/15	6 15
Japan Filature, X	13/15	6 10
Japan Filature, Best No. 1/X	13/15	6 05
Canton Filature, New Style	14/16	4 95
Canton Filature, New Style	20/22	4 60
Italian Grand Extra Classical		6 20
Tsatlee Reeel, "Blue Dragon and Flying Horse"		4 80
Tussah Filature, eight cocoon		3 10

Bemberg Starts on October 1

Production at Johnson City Plant to Get Under Way Gradually

JOHNSON CITY, TENN.—The Happy Valley plant of the American Bemberg Co., near Johnson City, will begin operations about Oct. 1 according to the announcement made last week by Dr. Arthur Mothwurf, president of the company who arrived in Johnson City on Aug. 24.

Dr. Mothwurf will probably locate in Johnson City but will not spend all of his time here, as he will frequently visit the other plants of the company of which he is president, which are located in Germany, France and Italy.

Max Korff, vice-president and general manager, will soon arrive from Europe where he has been visiting the German plant. He expects to make his home near the Johnson City industrial district.

"At present," stated Dr. Mothwurff, "Our principal object is to complete the power plant which we hope to have ready about the middle of September. Something more than half the machinery has been installed in the plant and about the first of October we anticipate being able to start operations gradually, working a part of the machinery at first and steadily building up in carrying out the manufacturing process. It will probably be the first of the coming year before all departments of the completed plant will be in full operation, although some of the finished product may come through this fall."

SUMMARY OF SILK CABLES

Best No. 1/X Yokohama	1590 Yen
Exchange at 3 m/s	48 3/4
Cost C. I. F. New York	$6.13

Prices in Yokohama advanced last week as exchange moved off another eighth to 48 5/8. Moderately active buying on August 26, 27, and 28 accounted for transactions of 4,400 bales which was sufficient to advance Best No. 1/X to 1590 Yen. At this level exporters withdrew from the market being influenced to some extent by the exchange which recovered to 48 3/4. For the full week transactions were less than 5,000 bales. Considerable interest centered on the Yokohama Bourse. The presence of a sizable short interest was indicated by the 20 to 30 Yen advance as the August delivery was closed. Trading on this day totalled 3,200 bales. Early transactions in September advanced this month to 1655 Yen as compared with 1590 for spot silk.

Manufacturers of
HOSIERY TRAM

Artificial Silk on Cones

Artificial Silk twisted with Raw Silk

Artificial Silk twisted with Worsted

VAN STRAATEN AND HAVEY, Inc.

Artificial Silk twisted with Cotton

Mercerized Cotton twisted with Raw Silk

Sample Cones sent on Request

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PHILADELPHIA

New York Office: 389 Fifth Ave.
A. Rosenstrauch, Representative

Boston Representatives:
Perkins & Boland, Inc., 80 Federal St., Boston

Pennsylvania and Southern Representative:
John S. Bowes, 137 Berkley St., Philadelphia

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SILK MILLS

Commission Throwsters

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Known throughout the trade for 30 years.

Largest production in the Eastern States.

Prices and interesting particulars upon request.

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"If it's Hood It's Good"

When It's Speed That Counts

Repairs to textile machinery must be done quickly or production is impaired. Quick, efficient service has been the motto of the R. H. Hood Company for over forty years. We have now the largest and best equipped factory dealing with **COMB CIRCLES AND FALLERS** in America. In repairing and replacing other parts for worsted machinery we guarantee the same speedy and accurate work.

ESTABLISHED 1885
R.H. HOOD CO.
INCORPORATED

19th & Westmoreland Sts., Philadelphia, Pa.

See also CONSOLIDATED TEXTILE CATALOG

"Wear American-Made Fabrics"

Mr. I Kno-Wool Says:

"Some men shave with a dry lather, and then talk about their tough beards."

Reworked Wool has made it easier in many cases to meet tough competition. Why make it hard for yourself by overlooking its possibilities?

Send for Samples.

THE BASCH & GREENFIELD CO.

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Home Office & Mills Newark, N. J. | Established 1872 | Phila. 114 Chestnut St.

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WOOL AND COTTON
FOR FLOCK PRINTING, RECORD, RADIO, WOOLEN AND RUBBER MFG.
Trial Samples Supplied Gratis
CLAREMONT WASTE MFG. CO., DEPT. W, CLAREMONT, N.H.

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1907-17 Mendell Street - Chicago
140 S. Front Street - Philadelphia

Hallowell, Jones & Donald
FOREIGN WOOL DOMESTIC
252 Summer Street : BOSTON

GORDON BROTHERS, INC.
HAZARDVILLE, CONN.
Reworked Wool, Wool Waste
Custom Carbonizing by Dry Process

General Fiber Co.
Reliable Graders of
WOOLEN RAGS
Chicago—Illinois
Graded Linseys a Specialty

M. Salter & Sons
WOOLEN RAGS
REWORKED WOOL
Custom Carbonizing and Picking
CHELSEA, MASS.

WOOL

Specialties Rule Market

Standard Fibres and Rags Neglected—White Wastes Firm

The market for reworked wools has been steadily moving away from what may be termed staple lines. It is a business in specialties to a considerable extent and the same situation is seen in the consuming woolen industry itself. Standard woolen rags are very dull and in the buyer's favor. Apart from specially packed merinos, light hoods and white flannels in which certain colors are thrown out and comparative freedom from rayon is guaranteed, there is but little moving. Sweater clips both mixed and in solid colors are moving freely while blue worsted clips hold to high price of 42c. White softs are nominal at 8c and rough cloth at 2c. Conditions in the Dewsbury market are without notable change but consumers are willing to take fine rags if price concessions are made. There is a shortage of some materials while many other sorts are going into stock. A similar situation, on a smaller scale, perhaps, is seen in the Boston district.

Government report covering wools in the grease, pulled wools, scoured wools, tops and noils again draws attention indirectly to what some consider the positive statistical neglect of the various bureaus who combine to issue this report in overlooking the magnitude and importance of recovered materials, woolen rags and clips which together constitute so large a raw material factor in the woolen industry. The report shows that there were in the United States June 30 about 50,000,000 lbs. of scoured wool, pulled wool, and noils. Stocks of recovered wools and their raw materials are probably very much more extensive, imports of woolen rags alone running approximately 25,000,000 lbs. annually. This branch of raw materials for the woolen industry is sadly in need of statistical guidance.

The wool waste market is moderately firm but quite inactive. The tendency seems slightly upward in the better grades of white materials. Threads and garnets seem to be the materials chiefly of interest to traders who sense an impending mill call in the near future. Fine threads however cannot be lifted above 85c nor the best ½ bloods above 80c. Colored threads remain inactive. Lap waste is strong. The output of this high-grade materials is falling off. Colored lap waste sells occasionally. Card and burr waste are semi-stagnant. Imports of wool wastes from all sources into the United States for the month of June amounted to 150,000 lbs. at an average value of 43c per pound. The greater part of this material, 120,000 pounds, came from Great Britain.

Vacuum Forming In Mill Stocks

Manufacturers Stocks Declining Actually and Relatively—Consumption Steadily Falling Off

BOSTON, MASS.

THE pessimistic tone noted in some sections of the wool business having for its keynote the almost entire absence of good business receives very little support from statistics covering shipments of wool out of Boston by rail for year to date. For many weeks between 3 and 4 million pounds of wool have been shipped out to consuming mills and the full total of such shipments for year to date is approximately 130,000,000 pounds as compared with 110,000,000 pounds similar period last year a gain of 20,000,000 pounds. Large amounts of wool are shipped out from this city by truck to many mills within a radius of fifty or more miles from Boston and it seems reasonable to believe that shipments by truck have also been larger than they were a year ago. Receipts of foreign wool into Boston for year to date are 152,000,000 pounds as compared with 125,000,000 pounds similar period last year a gain of 27,000,000 pounds. Allowing for extra shipments out of the city both by rail and truck it nevertheless seems probable that Boston has considerably more wool both foreign and domestic than was the case a year ago.

There is a good sized vacuum forming somewhere in the wool manufacturing industry. Manufacturers stocks are the smallest actually and relatively for several years. In June 1923 manufacturers holdings were 49.4 of total stocks while recent report shows that holdings June 30 this year were only 41.7. Taking the item raw wool the relative decline in manufacturer's holdings is clearly indicated as the following table shows:

	Total Stocks	Mfrs. Holdings	% of Total
June 1923..	411,978,000	191,047,000	46.3
June 1924..	323,713,000	147,113,000	45.5
June 1925..	292,146,000	118,857,000	40.7
June 1926..	316,399,000	111,369,000	35.2

Manufacturers wool holdings and manufacturing consumption have both been declining during the last four years. The secretary of the National Wool Growers' Association is quoted in a recent dispatch as saying "The total amount of wool consumed during the first six months of present year was 240,429,107 pounds which is an increase of 19% over the amount used in the same months of 1925." Secretary Marshall has quite inadvertently reversed his figures. Wool consumption grease basis declined from 263 million in 1925 to 240 million in 1926 a loss of approximately 9%. As compared with consumption for first half of 1923 the first half of 1926 is off approximately 32%. The following table shows the situation over the last four years (000 to be added):

	1923	1924	1925	1926
January .	63,348	53,845	51,435	41,446
February	57,916	50,633	46,415	40,491
March ..	62,859	47,630	45,853	43,931
April ...	56,411	44,361	43,286	40,093
May	59,682	36,507	38,246	36,237
June	52,648	30,972	38,176	38,259
Total ...	352,864	263,948	263,411	240,447

Wool and Substitute Quotations

(Corrected at close of business on Wednesday)

WOOL

Ohio, Pennsylvania and West Virginia

Fine delaine	.45—.46
Fine clothing	.39—.40
½ blood	.44—.45
¾ blood	.43—.44
¼ blood	.43—.44

California (Scoured Basis)

Northern, 12 mo.	1.00—1.05
Southern, 12 mo.	.85—.90

Texas (Scoured Basis)

Fine 12 mo.	1.08—1.10
Fine 8 mo.	.90—.95

Pulled—Eastern (Scoured Basis)

A.A.	1.10—1.15
A-Super	.93—.95
B-Super	.83—.85
C-Super	.65—.68

Montana, Idaho and Wyoming (Scoured Basis)

Staple fine	1.10—1.15
Do. ½ bld.	1.00—1.05
Fine & fine medium	1.00—1.05
¾ blood	.90—.92
¼ blood	.80—.82

Mohair—Domestic

Best combing	.75—.80
Best carding	.65—.70

Mohair—Foreign (In Bond)

Turkey Fair av.	.42—.43
Cape Firsts	.43—.45

Foreign Clothing and Combing (In Bond)

Scoured Basis—Cape:	
Super 12 months	.95—1.00
Super 10-12 months	.88—.92
Australian:	
70s	1.05—1.10
64s	.93—.95
58—60s	.83—.85
Grease Basis:	
Montevideo:	
58—60s	.41—.42
56s	.38—.39
50s	.35—.36
Buenos Aires:	
48, 40—44s	.28—.29
58, 36—40s	.26—.27

Foreign Carpet (Grease Basis in Bond)

China: Combing	.26—.27
Szechuen ass't	.24—.25
Cordova	.22—.24
Scotch Black Face	.21—.22
East India: Kandahar	.32—.35
Vican'r	.40—.46
Joria	.39—.45
Aleppo	.35—.36
Iceland, class 1	.37—.38
Iceland, class 2	.33—.35

SUBSTITUTES

Wool Waste

Lap—	
Fine white	1.10—1.12
Fine colored	.88—.90
Thread White Worsted—	
Fine	.82—.85
½ blood	.75—.80
⅜s blood	.65—.70
¼ blood	.48—.50
Thread Colored Worsted—	
Fine	.41—.43
½ blood	.35—.38
⅜s blood	.33—.35
¼ blood	.30—.32
Card—	
Fine white	.50—.55
Medium white	.38—.42

Old Woolen Rags

Merinos—	
Coarse light	9½—10
Fine light	17—17½
Fine dark	6—6½
Serges—	
Light	12½—13
Blue	8—8½
Black	7½—8
Red	17—17½
Knit—	
White	40—41
Red	18½—19
Light Hoods	23—24
Worsteds—	
Light	10—10½
Black	8½—9
Blue	8½—9

Australians Open Firm

Good Support at Sidney—Local Buying in Firm Market

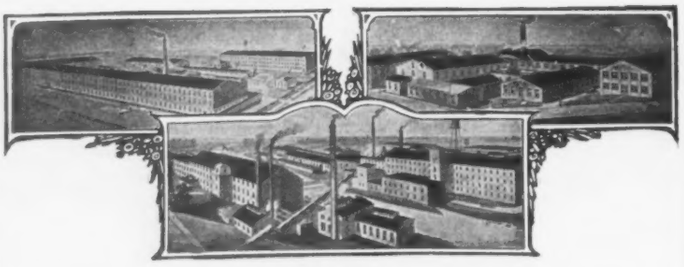
BOSTON.—The opening of the new Australian season with initial sales at Sidney was featured by good continental and British support of the market resulting in prices, according to cable, being up from par to 5% from previous Australian sales of wool. The 1926-1927 clip is estimated at 2,243,000 bales and if the situation develops satisfactorily half this amount will be catalogued between now and Christmas. Sales of Australian and New Zealand wools last season were the largest in many years totalling 3,147,000 bales as compared with 2,694,000 bales in 1921-1922 and 1,968,000 bales in 1913-1914. The remarkable absorption of last season's sales on a generally steady market was very significant.

The situation in wool seems shaping up for larger business at prices near current level which have been steadily maintained, as a matter of common interest and without great difficulty, for several weeks past. Summer Street seems likely to get what it has wanted for a long time, a stable market in raw materials. There is no scarcity of wools so far as sellers are concerned but there is some reason to believe that consumers have relatively less wools in their warehouses at this time of the year that for several seasons. If mill demand is not at the moment satisfactory, lacking urgency and volume, it is more than likely to be considerably better in the near future.

Shipments of wool out of the city continue quite good running well above 3,000,000 pounds weekly by rail alone. There has not yet been any very favorable reaction to this market

The Kent Manufacturing Co.

(Established 1843)



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COMBING, DRAWING & SPINNING MACHINES

for Cotton, Worsted and Silk Waste

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GENERAL AGENT FOR U. S. A. AND CANADA

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Textile Oil Specialists since 1887

Carbonizers and Neutralizers of Scoured Wools and Noils by the Dry Gas Process

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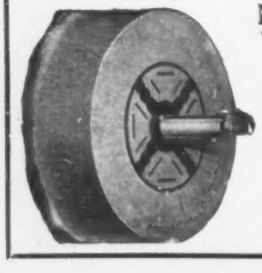

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Selected Adirondack and Vermont Maple Rolls for all Textile and Paper Mill Uses.

Reels for any Requirements. Fulling Machinery for Felts and Woolens. Piece Dyeing and Bleaching Machines. Wood Tubs and Tanks. Washers and Carbonizers.

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Scouring AND Carbonizing of WOOL AND NOILS

The Standard of Workmanship

Storage and Forwarding both in and out of bond

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THE BOOTH FELT CO. INC.

"For Every Textile Felt Need"

481-491 19th St., Brooklyn, N.Y.
737 Sherman St., Chicago, Ill.

Wool—Continued

thus far from the goods opening and the presumption is that the good purchasing which took place in June has given mills possession of sufficient wool, and yet to be delivered, to keep them going for some time. As previously noted Boston is not short of wool but only a long continuation of prevailing sluggish conditions could bring about any material softening in values.

During the last twelve months fine wools, tops and yarns have registered a moderate decline all three commodities keeping very close together in the matter of the percentage loss. The following table shows the situation in brief:

	Sept. 1	1925	Loss	Percent
Fine Wools...	$1.12	$1.28	16c.	14
Fine Tops...	1.35	1.58	23c.	17
Fine Yarns...	2.00	2.30	30c.	15

A little more interest has been shown in foreign wools during the last few days, both the Australians and the South American crossbreds being taken out of bond a little more freely. Combing 64s have sold on a basis of 92-95c; average 64s-70s, 95c; super 64s-70s, $1.03-$1.05. Montevideo 58s-60s are in larger interest and some of the crossbreds have been purchased for export. Wools for the woolen branch of manufacturing are not showing much life although the the finer grades of pulled wool have been in better inquiry. Pulled lambs have sold more freely. Scoured wools are stagnant and the same is true of carbonized wools. Mohair is steady. Large houses seem to be fairly well cleaned up but there is plenty of foreign hair in bond.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Aug. 28, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in lbs:

RECEIPTS AT BOSTON

Week Ended	Aug. 28	1926	1925
Domestic	2,712,000	127,533,000	101,500,000
Foreign	1,197,000	144,677,000	120,645,000
Total	3,909,000	272,210,000	222,145,000

IMPORTS AT PRINCIPAL PORTS

Boston	1,197,000	144,677,000	120,645,000
Philadelphia	1,127,000	32,218,000	62,369,000
New York	494,000	42,209,000	46,225,000
Total	2,818,000	319,104,000	229,239,000

Wool Trade Notes

John Davies, formerly connected with S. B. & B. W. Fleisher, Inc., Philadelphia, is now associated with Ryder & Brown Co., 120 S. Front St., wool dealers. Mr. Davies is well known in the trade, having been wool buyer for the former concern for years.

PHILADELPHIA, PA. Application for a charter of incorporation of a company to be called Frankford Knitting Mills, Inc., will be made Sept. 13. The company will be empowered to manufacture, buy and sell and deal in hosiery. Among those mentioned in the application were Albert N. Barrie and G. D. Weiss.

Better Woolen Interest

Good Demand for Low Grade Wools—Dealers Hold Firmly

PHILADELPHIA.—Although there is little activity in territory and fleece wools the market is firm. Manufacturers are receiving more good orders and as their stocks are low they are compelled to come into the market for additional wool from time to time. Notwithstanding this fact mills have not raised their ideas and trading is quiet at this time because dealers will not lower their ideas and manufacturers assert they are unable to buy wool unless this is done as their manufacturing margin is unusually small this season. Dealers state the market is displaying a stronger trend and are content to hold their wools.

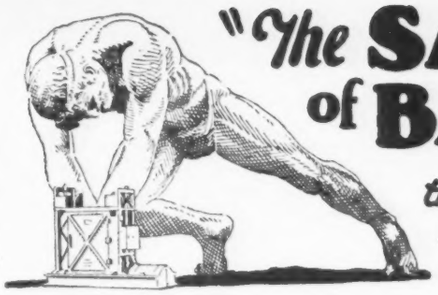
Many sales of fleece wools have been prevented because of a difference of only half a cent between dealers' and manufacturers' ideas of price. An example of this was seen this week in a sale of 30,000 lbs. of bright quarter blood fleece which was finally moved at 43c, the dealers' idea. Two knitting yarn spinners were bidding on this lot, both refusing to raise their offer above 42½c which the dealer refused to consider. The deal was delayed for more than a week by this difference of one-half cent, a thing not ordinarily possible in a sale of this size. One spinner needing the wool, which was a desirable lot, raised his bid to 43c and the sale was made at this level.

Strong Undertone

Other dealers state this represents the market condition as they are also receiving offers from spinners of 42c and 42½c for bright quarter blood fleece wools but refuse to consider less than 43c, and this slight difference is delaying the placing of a considerable volume of business. Although trading is not active prices can be described as firm and opinion in the trade is that manufacturers will probably be compelled to come into the market in a short time, not having wool on hand, and due to the fact they are now receiving more business, probably paying 43c for bright wools. Dealers assert they can not sell lower, pointing to the fact recent lots in country have changed hands at 40c.

Low Wools in Demand

There is a good demand for low grade wools, low quarter selling at 38c to 39c this week in fair-sized quantities; braid has been moved at 35c. This trend toward lower grades is also apparent in pulled wools, dealers reporting a good request for stained and gray which manufacturers are using in an endeavor to keep their costs on same goods lower than last year. Pulled wools in general are moving more actively and prices are steadier this week than last. Although B and C grades are the most popular there has been an interest in finer grades this week, one dealer reporting a sale of AA at $1.08. Improvement in carpet wools continues and prices remain strong. Demand from mills is better.



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the most powerful baling press built for

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- Wool
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- Paper
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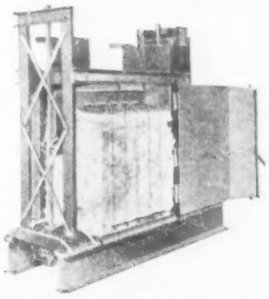
- Metal Scraps

All steel, economical and quick in operation, fireproof, "fool-proof" and indestructible Schick Balers provide the ideal means of handling waste material of every kind.

Made in 8 sizes—a size for every requirement—hand balers 125 to 375 lbs. capacity—Power balers 350 to 1500 lbs. capacity.

Depend on a Schick Baler for handling your waste material at a profit.

ALL STEEL Schick FIREPROOF



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Hand-Belt-Electric-Hydraulic
Baling — Presses

From year to year, hundreds of new names are added to the list of LOGEMANN baling-press users in the textile field.

Every year, repeat orders from users of LOGEMANN baling-presses increase steadily, denoting the satisfaction derived from this equipment.

But—

Until every mill-owner, superintendent, and operator, is familiar with the LOGEMANN line of balers for yarn, waste and finished goods, our advertising has not accomplished its purpose.

We solicit your inquiries.

LOGEMANN BROTHERS CO.
See also CONSOLIDATED TEXTILE CATALOG
MAIN OFFICE & WORKS
3100 Burleigh St., Milwaukee, Wis.

NATIONAL SOLANTINE YELLOW 4GL

AN addition to our line of Fast-to-Light Direct Dyes, producing pure greenish yellow shades.

Its good solubility and inertness to metals make it well suited for use in all types of dyeing machines. Dyes level and may be used in combination with other direct dyes. Of particular use on cotton, rayon, and pure and tin-weighted silks.

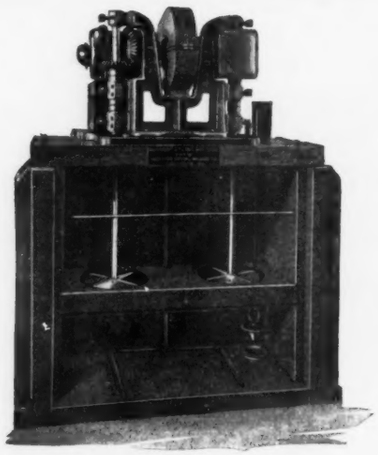
Readily discharged with hydrosulfite.

National Aniline & Chemical Co., Inc.
40 Rector Street, New York, N. Y.

BOSTON PHILADELPHIA SAN FRANCISCO
PROVIDENCE CHICAGO MONTREAL
HARTFORD CHARLOTTE TORONTO

NATIONAL DYES

NATIONAL N DYES



Motor Driven Circulating Head

Bushed bearings renewed without disturbing the head.
Cut gears, enclosed with cast iron covers.
Top bearings elevated and perfectly balanced propellers to overcome thrust or deflection at bottom of shaft.
Propeller design and shaft centres to equalize the flow of liquor.
Enlarged shafts to ensure rigidity.
Casted pans and drains to arrest all oil.
Casted oil-tight chain cases.
Silent chain drive.
Motor elevated above greatest heat of the machine, and drive chain takeup adjustment.

Incorporated 1907

Hussong Dyeing Machine Co.
Groveville, New Jersey

Chemicals from The Air

AMERICAN CYANAMID COMPANY — AERO BRAND — PRODUCTS

As pioneer producers of air nitrates, we have developed processes for the commercial production of many chemicals from air-nitrogen bases, insuring standards of purity which were considered impossible in the processes formerly employed.

Among these industrial chemicals the following are of special interest to the Textile Industry:

Yellow Prussiate of Soda
Yellow Prussiate of Potash
Aqua Ammonia
Thiourea
Dicyandiamid
Formic Acid
Sulphocyanides

AMERICAN CYANAMID COMPANY
INCORPORATED
511 Fifth Avenue New York City

DYESTUFFS AND CHEMICALS

SRA Dye Prices Revised

The American Cellulose & Chemical Mfg. Co., New York, has issued a new revised price list on its SRA dyestuffs and assistants which became effective on Sept. 1.

The list of dyes, developers and assistants and their prices follows:

SRA DYES	Price per lb.
Black III	8.35
Black IV	.58
Black IV HY Special	.75
Blue III	1.45
Blue IV	1.60
Blue V	1.45
Golden Orange I	.62
Golden Orange III	1.00
Orange I	.55
Orange II	.85
Orange III	.85
Red I	1.10
Red III	1.50
Red V	.79
Pink II	.70
Violet II	1.75
Heliotrope I	1.50
Pure Yellow I	.85
Pure Yellow II	.55
Golden Yellow VIII	.55
Golden Yellow IX	.57
Golden Yellow X	.90
DEVELOPERS	
Beta Oxy Naphthoic Acid	2.60
Naphthol AS	2.60
Black Developer HY Spec	3.25
ASSISTANTS	
Celascour	.12½
Sodium Phenolate (40% solution)	.18

The company states, "Our SRA Dyeing methods for Celanese brand products are covered by patents, patent applications and secret processes, which are the property of this company. Our clients and their dyers can use these processes free of charge if used in conjunction with Celanese brand yarns, fabrics or articles, made in the United States of America."

Dye Papers for A. C. S. Meeting

Symposium on Dye Progress a Feature of Golden Jubilee Week —Other Speakers on Program

A symposium on "The Progress of the Dye Industry in the United States during the last Decade" is to be a feature of the meeting of the Dye Division of the American Chemical Society to be held next week in Philadelphia in connection with the Society's Golden Jubilee.

Symposium on Progress

Dr. M. L. Crossley will be chairman of this dye symposium and following are the papers and their authors who composed the program for this event:

"Ten Years of Progress in the Dyes and Intermediates Industry in the United States"—M. L. Crossley.

"Importance of Research in the Dye Industry"—C. G. Derick.

"Relation of the University to the Dye Industry"—E. Emmett Reid.

"Protection for the American Dye Industry"—Grinnell Jones.

"The Development of Synthetic Anthraquinone"—Kenneth H. Klipstein.

"The Manufacture of Indigo in America"—Charles J. Strosacker.

"The Progress in the Development and Manufacture of Vat Colors in America"—O. M. Bishop and J. H. Sachs.

"The Development of the Food Color Industry in the United States"—W. C. Bainbridge.

"Medicinals and Dyes"—E. H. Volwiler.

"Aniline Dyes in Medicine"—John W. Churchman.

"The Production of Biological Stains in the United States"—H. C. Conn.

"The Contribution of the Dyestuff Industry to the Development of the Rubber Industry"—D. H. Powers.

"The Contribution of the Color Laboratory to the Industry"—H. T. Herrick.

"The Work of the Bureau of Standards on Dyes"—William D. Appel.

"Fur Dyeing and Fur Dyes in America"—W. E. Austin.

Papers for Regular Session

The program for the regular meeting of the Dye Division of the American Chemical Society lists the following technical papers:

"The Effect of Phosphates on the Absorption of Orange II Dye by Iron, Aluminium and Chromium Gels"—Neil E. Gordon and C. E. White.

"The Preparation of Alizarine from Phthalic Anhydride and Ortho-dichlorbenzene"—Max Phillips.

"Studies in Vapor Pressures of the Toluidines"—J. F. T. Berliner and O. E. May.

"Studies in Vapor Pressures of the Napthols"—O. E. May, J. F. T. Berliner and D. F. J. Lynch.

"Studies in Vapor Pressures of the Mono-Nitro-Toluenes"—J. F. T. Berliner and O. E. May.

"Why the Blue-blooded Indanthrene Blue and G. C. D. Show a Red Streak on Boiling"—V. R. Kokatnur.

General Meeting

The general meeting of the American Chemical Society opening the Jubilee Week will be held on Sept. 6. Addresses of welcome will be made by Mayor W. F. Kendrick, Prof. W. T. Taggart and Dean John Frazer of the University of Pennsylvania. Response will be made by Prof. James F. Norris of the Mass. Institute of Technology, president of the A.C.S.

On Sept. 6 also addresses will be made by Irene du Pont on "The Dyestuff Industry, Forerunner of What?" by Paul Sabatier of France, Nobel Prize winner in chemistry on "La Chimie Moderne et Marcelin Berthelot," and by Prince Piero Ginori Conti.

Miscellaneous Chemicals

Alumina Sulp. com.	1 40	— 1 45
Iron Free	2 00	— 2 05
Alum. Ammonia Lmp.	3½—	3½
Potash, Lump	2¾—	3½
Ammoniac, Sal. white gr., dom.	5½—	7
Bleach powder, per 100 lb. works, carloads	2 00	— 2 40
Blue Stone	5 —	...
Calcium Arsenate	7½—	9½
Chlorine, Liq. Cylinders	5½—	9
Tanks	4	4¼
Copperas, ton	12 00	—18 00
Cream of Tartar	21 —	21½
Epsom Salts, 100 lb.	1 80	— 2 00
Formaldehyde Spot	9 —	9½
Glauber Salts, 100 lb.	80	— 1 20
Glycerine (C. P.) bbls.	30 —	32
Cans	31½—	33½
Yellow Crude	30 —	32
Hydrosulphite Conc.	23 —	25
Lead—Brown acetate	13 —	13½
White (crystals)	14 —	14½
Lime, acetate, 100 lb.	3 25	— ...
Potassium—Bichromate	8¼—	8½
Chlorate crystals	8½—	9
Permangan, tech	14½—	15
Sodium acetate	4½—	5
Bichromate	6½—	6¾
Bisulphite, 35%	1 50	— 1 75
Nitrite	9 —	9¼
Phosphate	3¼—	3¾
Prussiate, yellow	10 —	10¼
Sulphide, 60% fused.	3¾—	4
30% crystals	2½—	...
Tartar emetic, tech	29 —	31½
Tin—Crystals	41½—	42
Bichloride, 50 deg.	17 —	17¼
Oxide, bbls.	64 —	66
Zinc Dust	9½—	10

Acids

Acetic, 28% per 100 lb.	3 25	— 3 50
Citric crystals	45 —	...
Formic, 90%	10½—	11
Lactic, 22%	5½—	7
Muriatic, 18 deg. per 100 lb. in tank cars	85 —	95
Nitric, 36@42 deg. per 100 lb.	5 00	— 6 75
Oxalic	10¾—	11½
Sulphuric, 66 deg. per ton in tank cars	15 00	—16 00
Tartaric	29 —	29½

Alkalies

Ammonia, aqua, 26 deg.	3½—	4
Borax, Crys. bbls.	5¼—	...
Potash, carbonate, 80-85%	6 —	6¼
Caustic, 88-92%	7⅛—	7⅝
Soda Ash, 58% light	1 43	— 2 44
Contract, 100 lb.	1 25	— 1 63
Bicarb, per 100 lbs.	1 90	— 2 25
Caustic, 76% per 100 lb.	3 20	— 3 90
Contract, 100 lb.	3 10	— ...
Sal. 100 lb.	1 10	— 1 25

Natural Dyes and Tannins

Fustic: Crystals	20 —	22
Liquid, 51 deg.	10 —	12
Gambier, liquid	12½—	...
Hematine, crystals	14 —	20
Hypernic Ext.—51 deg.	12 —	16
Indigo—Madras	1 30 —	...
Logwood Extract, liq. 51 deg.	8 —	10
Crystals	16 —	20
Osage Orange, Extract, 51 deg.	7 —	7¼
Quercitron extract, 51 deg.	6 —	7
Sumac, Ext. dom., ref., 51 deg.	6½—	7
Extract, stainless	10 —	...
Tannic Acid, tech.	35 —	40

Dyestuffs and Intermediaries

Alpha Naphthol, ref.	90 —	95
Crude	60 —	65
Alpha Naphthylamine	35 —	37
Aniline Oil	15 —	17
Salt	22 —	24
Beta Naphthol, sublimed	55 —	60
Technical	22 —	24
Dimethylaniline	30 —	32
Metaphenylene Diamine	90 —	95
Paranitraniline	48 —	50

Oils and Soaps

Castor Oil, No. 3	12 —	13
Olive Oil, denatured, gal.	1 20 —	...
Foots	8½—	9
Red Oil, bbl.	9 —	10½
Stearic Acid, double presses	13 —	13½
Turkey Red Oil, 50%	10 —	12

Adhesive and Sizing Materials

Albumen, blood domestic	50 —	55
Dextrine-Potato	7½—	8
Corn, bags, 100 lb.	4 07	— 4 12
Do. bbls. 100 lb.	4 34	— 4 39
Gum, British, 100 lb.	4 37	— ...
Do. bbls.	4 64	— ...
Sago flour	3½—	4
Starch, corn, 100 lb.	3 32	— 3 42
Do. bbls.	3 59	— 3 69
Do. thin boiling, bags, 100 lb.	3 92	— 4 02
Do. bbls.	4 19	— 4 29
Potato	6½—	...
Rice	9 —	9½
Wheat	6½—	7
Tapioca flour	3½—	5½

Coal Tar Dyes

Direct Colors—		
Black (H-acid)	28 —	35
Black Columbia FF.	50 —	60
Blue, 2 B.	24 —	32
Blue, sky ordinary	60 —	80
Blue, 2 GL.	2 00	— 3 50
Blue, 4 GL.	2 25	— ...
Blue Sky, FF.	95	— 1 50
Blue, Fast, RL.	1 90	— ...
Blue, Solamine	2 00	— ...
Benzo Azurine	75	— 80
Brown, C	40	— 60
Brown, M	70	— 90
Brown, Congo G	85	— ...
Brown, Congo R	80	— ...
Green, B	60	— 90
Green G	65	— 90
Orange, Congo	60	— ...
Orange, Fast S.	1 70	— ...
Red, Fast F.	80	— 90
Red, Congo	40	— 50
Benzo Purpurine 4 B.	40	— 60
Benzo Purpurine 10 B.	1 25	— 1 50
Scarlet, 4 BA.	1 50	— ...
Scarlet, 4 BS.	2 10	— ...
Scarlet, 8 BS.	2 15	— ...
Scarlet, Diamine B.	1 65	— ...
Violet N	1 10	— 1 20
Yellow chrysophenine	60	— 1 80
Yellow, Stilbene	90	— 95
Developing Colors—		
Black, B H	40	— 60
Black Zambesi	...	— 90
Bordeaux, Dev.	2 50	— ...
Orange, developed	2 50	— ...
Primuline	1 00	— 1 15
Red, Dev. 7 BL.	2 50	— ...
Scarlet, Dev.	2 50	— ...
Sulphur Colors—		
Black	14	— 24
Blue, cadet	90	— 95
Blue, navy	50	— 60
Brown	20	— 60
Green	55	— 1 50
Green, olive	25	— 50
Yellow	45	— 50
Basic Colors—		
Auramine	90	— 1 00
Bismark Brown	50	— 60
Chrysoidine	40	— 65
Fuschine crystals	1 50	— 1 75
Malachite green	1 50	— ...
Methylene blue	1 10	— 1 25
Methyl violet	80	— 1 15
Rhodamine B, extcone	5 50	— 6 00
Safranine	1 45	— 1 60
Victoria Blue B	3 10	— ...
Acid Colors—		
Naphthol blue blk	35	— 60
Naphth lamine black 4 B	50	— 55
Alizarine saphirol	2 75	— 4 00
Alkali blue	3 25	— 3 50
Indigotine	75	— 1 30
Induline (water soluble)	75	— 80
Soluble Blue	3 00	— 3 75
Sulphoneyanine	70	— 95
Sulphone Blue R	60	— 95
Patent Blue A	2 85	— ...
Rescorcin brown	80	— 90
Guinea green	1 00	— 2 20
Wool green S	70	— 1 70
Orange II	24	— 30
Orange GG crys	60	— ...
Acid Fuchsine	80	— 90
Azo eosine G	65	— 82
Croceln scarlet	1 15	— 1 30
Fast red A	50	— 65
Azo yellow	1 35	— 1 40
F. Light Yellow 2 G.	2 00	— ...
F. Light Yellow 3 G.	1 00	— 2 50
Naphthol, yellow	1 35	— 1 40
Chrome Colors—		
Aliz. Black B	2 00	— ...
Diamond Black PV.	70	— ...
Chrome Blue Black	40	— 50
Chrome Brown	60	— 1 25
Chrome Green	75	— 1 50
Chrome Yellow	45	— 1 10
Indigo—		
Synthetic 20% paste	14	— 14½

THE
Chemical Engineer

The chemical engineer has revolutionized methods in almost every line of industry so that definite facts, long guessed at or even unknown, are available for scientific process of manufacture.

They turned the microscope and camera upon fabrics treated with the special purpose

Wyandotte Textile Alkalies

and discovered that the better condition of the fibres, their unharmed tensile strength and superior spinning qualities explained the better quality results these materials produce.

As a consequence, increasing numbers of mills are standardizing these special textile alkalies for treatment of textile fabrics.

Ask your supply man, or write our technical expert.

The J. B. FORD CO.
Sole Manufacturers
Wyandotte, Michigan.

Einstein has quite possibly upset the accepted theories of matter but the conscientious expert service back of WARREN SOAP is more firmly established than ever.

Warren Soap Manufacturing Company
77 Summer Street, Boston, Mass.
Established 1870 Incorporated 1890

TEXTILE SOAPS
MADE IN PAWTUCKET, R.I.
J.O. DRAPER CO.

NOTTINGHAM CURD
TALLOW CHIP No. 2 and No. 3 Chip SOAP
POTASH FIG SOAPS
for Woolens and Worsteds made with
Red Oil Olive Oil
Amber Oil
Olive Foots

Palm Oil
Curd SOAP
Olive SOAP
Chips or Bars
Soap Powder
For Mill Floors

Established 1860. Incorporated 1905 LET US SUPPLY YOU

S. R. DAVID & COMPANY
INCORPORATED
Dyestuffs
252 Congress Street Boston, Mass.

Sole New England Agents for LACTAMINE and VIOLAMINE.
New England Agents for the FADE-OMETER,
Manufactured by Atlas Electric Devices Co.

ANTHRACENE BLUE
W. R. and W. G. Pre-war Types
Extremely fast and level dyeing
Dyes well by Franklin Machine Process.
E. J. FEELEY, Inc., *Sole Agents*
Manufacturers - Agents - Importers
DYESTUFFS and CHEMICALS
128-130 Oliver St., Boston, Mass.

ALL STEEL
ECONOMY
FIRE PROOF
BALING PRESSES
ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.
ECONOMY BALER CO. Dept. J. ANN ARBOR, MICH. U.S.A.

Fletcher Under-Driven Extractor

High Speed—
Low Cost

The high speed of Fletcher Extractors gives an unusually high percentage of extraction, as well as reducing the time for handling loads. Easy loading and unloading result in further savings that enable many textile mills, that use Fletcher Extractors, to maintain a very low unit cost in their extracting work.

See also CONSOLIDATED TEXTILE CATALOG

FLETCHER WORKS
INCORPORATED
Formerly Schaum & Uhlinger
PHILADELPHIA, PA.

Textile Manufacturers
Should be interested in DIAX for the following reasons

FOR BLEACHING
Purer whites are obtained, less tendency to weaken fibres, saving of time and chemicals.

FOR DYEING
More level dyeings are obtained with economy of dyestuffs. Thorough degumming of previously dyed and finished goods are easily and cheaply performed.

FOR MERCERIZING
Has increased affinity of the cloth for the caustic liquor, gives better lustre, the mercerizing lye kept clearer and lasts longer.

FOR PRINTING
It is especially useful in making adhesive sizes and finishes, and less expensive, and is devoid of color and easily removable.

FOR FINISHING
Thin fluid mixing are produced which penetrate the cloth better, giving superior results in the handle and feel of the cloth, and economy in the use of starch and dextrine.
Further information gladly given. Write

Malt-Diastase Company
79 Wall Street, New York City
Laboratories: Brooklyn, N. Y.

REG. U. S.
DEC PATENT ALSO OFFICE

Water softeners for throwsters, scourers, bleachers, dyers and finishers

LIME & SODA Softeners
FILTERS & PURIFIERS

American Water Softener Co.
S. E. Cor. 4th and Lehigh Ave., Phila., Pa.

Dyestuffs and Chemicals—Continued

member of the Italian Senate, on the development of Italy's resources.

Prof. J. F. Norris will speak on Sept. 7 on "The Future of the Chemistry of Petroleum" and on Sept. 9 Prof. S. W. Parr of the University of Illinois will speak on "The Processing of Coal."

Chemical Equipment Men Plan Meeting

Annual Meeting and Technical Conference to be Held in New York on Sept. 9 and 10

Arrangements are nearing completion for the annual business meeting of the Association of Chemical Equipment Manufacturers, to be held at the Chemists' Club in New York City, Sept. 9 and 10. The election of officers for the coming year is now being conducted by mail, and it is expected that the installation of officers will take place at the meeting.

An important feature of the meeting will be the technical sessions, which will involve the presentation by each member company of a technical paper having current interest value, and dealing with new developments in their equipment products, or new utilizations thereof, or other innovations in the fields of chemical, processing and industrial engineering.

Attendance at the meetings will consist of the authorized administrative or technical executives of member companies, and, by invitation, a number of professors representing the technological departments of selected eastern and middle western universities and technical schools. The professors will make a selection of the papers presented, and those suitable will be incorporated in their lecture programs for the academic year 1926–1927. This practice is in accordance with, and forms a part of the educational program of the association.

The sessions will be of a confidential nature, and the papers read will not be released for general publication until after their presentations at the various colleges.

National Solantine Pink 4 BL and Blue 2 GL Announced

Among the most recent additions to the line of fast-to-light direct dyes manufactured by the National Aniline & Chemical Co., Inc., are National Solantine Pink 4 BL and National Solantine Blue 2 GL. The former produces shades much bluer than National Solantine Red 8 BLN, and is desirable where delicate tones are required. The latter is intermediate in shade between National Solantine Blue 4 GL and National Solantine Blue 3 G.

The company describes the colors as follows:

"National Solantine Pink 4 BL possesses excellent solubility and level dyeing properties, and is recommended for application to cotton and rayon, and for union dyeing, in which animal fibers are practically unstained. Excellent whites are obtained when discharged with hydrosulfite. The paper trade should find this dye of use for the tinting of bonds where special light fastness is required.

"National Solantine Blue 2 GL also possesses excellent solubility and good level dyeing properties, and is resistant to the influence of metals, thereby making it well suited for use in all types of dyeing machines. This dye should find favor for the dyeing of cotton and rayon, and for union styles, in which animal fibers are left practically clear. Its excellent dischargeability with hydrosulfite recommends it to the printing trade, while its fastness to light and resistance to acid and alkaline adhesives make it highly desirable for the paper trade."

Another New National Direct Black

National Erie Black RF is a new direct black offered by the National Aniline & Chemical Co., Inc., as a companion product to National Erie Black BF. It is redder in shade than the latter dye, but possesses similar properties,—being of excellent solubility, dyeing level, and staining acetyl cellulose but slightly.

Like the other direct blacks of this class National Erie Black RF is highly recommended by the company for the dyeing of cotton rayon, pure and tin-weighted silks, and cotton and silk hosiery. It also will be found desirable as a speck dye, and in the dyeing of leather and paper. It is also said that noticeable improvement in fastness to washing is obtained by the usual after-treatment with formaldehyde.

Handbooks on Ciba, Cibanone and Chlorantine Fast Colors

The policy of the Ciba Company to furnish complete data for the successful use of their colors has inspired the preparation of three new handbooks. Ciba, Cibanone, and Chlorantine fast colors are fully treated in these handbooks which are being distributed to the trade. Properties of the colors, instructions and tables for their application, together with sample dyeings, make these books serviceable to users of dyestuffs.

To Measure Degrees of Fading

WASHINGTON, D. C.—The Bureau of Standards now is seeking a method whereby the extent of fading of a dyed fabric may be represented by an actual figure. The broad terms, "faded slightly," or "faded badly" have no value, C. W. Schoffstall, chief of the Textile Section, points out, because of the variation in individual response to such descriptions. A mathematical value for a colorometric or spectrometric record would be specific and subject to no misinterpretation.

AMALIE PRODUCTS

Power of Penetration

The Facts about Amalie Sonolene are well worth Knowing!

What are you looking for in the bleaching and dyeing of cotton yarns and piece goods? Speed? Economy? Quality? All these you get in Amalie Sonolene—a most powerful detergent.

For Amalie Sonolene is *a forceful penetrant* which

—increases the effectiveness of penetration by the alkali, and counteracts its harsh action;

—causes maximum thoroughness and completeness of the Kier boiling;

—readily dissolves and removes the natural fatty and waxy impurities in the cotton, attaining perfect white in bleaching;

—*requires only one boil where two were needed;*

—in open and closed dyeing machines, eliminates the usual difficulties of ordinary turkey red oils through foaming, being recommended especially for Franklin Dyeing Machines;

—in raw stock dyeing, eliminates static by the addition of from 1½% to 2%.

And all these advantages come back to its essential property—its *power of penetration.* Try out Amalie Sonolene and be convinced!

Leaflet completely describing the properties, function and uses of Amalie Sonolene sent anywhere free upon request.

L. SONNEBORN SONS, Inc.

Manufacturing Chemists for the Textile Industry

114 Fifth Avenue New York

Sales Offices and Warehouses in all Principal Textile Centers

Amalie SONOLENE

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